

2 as defined in Tables 2-4, wherein said agent induces an immune response in said patient to a polypeptide having a sequence comprising SEQ. ID NO:162.

Please add the following new claims:

2 --21. (New) The method of claim 20, wherein the agent is a protein or polypeptide formulated as a vaccine which comprises one or more additional components selected from excipients, diluents, adjuvants or the like.--

3 --22. (New) The method of claim 20 comprising administering a vaccine composition comprising one or more nucleic acid sequences encoding the amino acid sequence of SEQ ID NO:162 for prophylaxis or therapy of *S. pneumoniae* infection.--

IN THE SPECIFICATION:

Please delete the second full paragraph located on page 1, and replace therewith the following replacement paragraphs. A marked-up version showing changes made to the replacement paragraphs is contained herewith as Appendix B.

**--Background of the Invention**

3 *Streptococcus pneumoniae*, commonly referred to as the pneumococcus, is an important pathogenic organism. The continuing significance of *Streptococcus pneumoniae* infections in relation to human disease in developing and developed countries has been authoritatively reviewed (Fiber, G.R., Science, **265**:1385-1387 (1994)). That indicates that on a global scale this organism is believed to be the most common bacterial cause of acute respiratory infections, and is estimated to result in 1 million childhood deaths each year, mostly in developing countries (Stansfield, S.K., *Pediatr. Infect. Dis.*, **6**:622 (1987)). In the USA it has been suggested (Breiman *et al*, *Arch. Intern. Med.*, **150**:1401 (1990)) that the pneumococcus is still the most common cause of bacterial pneumoniae, and that disease rates are particularly high in young children, in the elderly, and in patients with predisposing conditions such as asplenia, heart, lung, and kidney disease, diabetes, alcoholism, or with immunosuppressive disorders, especially AIDS. These groups are at higher risk of pneumococcal septicaemia and hence meningitis and therefore have a greater risk of dying from pneumococcal infection.

<sup>3</sup> The pneumococcus is also the leading cause of otitis media and sinusitis, which remain prevalent infections in children in developed countries, and which incur substantial costs.--

Please delete the second full paragraph located on page 3, and replace therewith the following replacement paragraphs. A marked-up version showing changes made to the replacement paragraphs is contained herewith as Appendix B.

### **--Brief Summary of the Invention**

<sup>4</sup> Thus, in a first aspect the present invention provides a Streptococcus pneumoniae protein or polypeptide having a sequence selected from those shown in Table 2 herein.--

Please delete the last paragraph located on page 3 extending to page 4, and replace therewith the following replacement paragraphs. A marked-up version showing changes made to the replacement paragraphs is contained herewith as Appendix B.

### **--Detailed Description of the Invention**

<sup>5</sup> As discussed herein, the proteins and polypeptides of the invention are useful as antigenic material. Such material can be "antigenic" and/or "immunogenic". Generally, "antigenic" is taken to mean that the protein or polypeptide is capable of being used to raise antibodies or indeed is capable of inducing an antibody response in a subject. "Immunogenic" is taken to mean that the protein or polypeptide is capable of eliciting a protective immune response in a subject. Thus, in the latter case, the protein or polypeptide may be capable of not only generating an antibody response and in addition non-antibody based immune responses.--

Please delete the paragraphs starting at page 29, 1<sup>st</sup> full paragraph (immediately below the heading "Table 1") and extending to and including the last full paragraph located on page 100, and replace therewith the following replacement paragraphs. A marked-up version showing changes made to the replacement paragraphs is contained herewith as Appendix B.

--4101.1 (SEQ. ID. NO. 208)

<sup>6</sup> ATGGAAGAGTTAGTGACCTTAGATTGTTTATTGACAGAACTAAGATTGAAGCCAATGCCAACAAGTATAGTTTTGTGTG  
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CCTGTCTTTGGGCAGATAAAGGCTTCTTTGGGTTACAAGAGATGTAATCTGAGAGGGAAGCGTCAAGTGAGAATTGACATGG  
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4101.3 (SEQ. ID. NO. 209)

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4101.5 (SEQ. ID. NO. 210)

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4102.1 (SEQ. ID. NO. 211)

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4106.1 (SEQ. ID. NO. 212)

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4106.4 (SEQ. ID. NO. 213)

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4106.6(SEQ. ID. NO. 214)

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4106.7 (SEQ. ID. NO. 215)

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TGATCTTGACTCCGTCAACAACGATCGCGCTCTCGTGATTGAAAACATCAAAACGTGCCAACCAAGCGGTGCCCTCATTGCC  
AACCCACGTGAAGGCGAAGGCTCTCTCTTTGACGAAAGTGGCAAGATTACAGGTGTTGTAGCTCGTGATCTCTTGACAGACC  
AAGTGTGTTGAAATCAAGGCCCGCTCTGGTTATTAATACAACAGGTCTTGGAGTGATAAAGTACGTAATTTGTCTAATAAGGG  
AACGCAATTTCTCAAAATGCGGCCAACTAAGGGAGTTCACTTGGTAGATATCAAGCAAAATCAAGGTTTACAGGCCAGTT  
TACTTCGACACAGGTTTGGGTGACGGTCGTATGGTCTTTGTTCTCCACGTGAAAACAAGACTTACTTTGGTACAACATGATAC  
AGACTACACAGGTTGATTGGAGACTCCAAAAGTAACCTCAAGAAGATGTAGATTATCTACTTGGCATTTGTCAACAACCGCTTC  
CCAGAATCCAACATCACCATTGATGATATCGAAAGCAGCTGGGCAGGTCTTCG  
TCCATTGATTGCAGGGAACGATGCCTCTGACTATAATGGTGGAAATCAACGTTACCATCAGTGATGAAAGCTTTGACAACCTTG  
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GGTGGTAAAAATCACAGACTACCGTAAGATGGCTGAAGGAGCTATGGAGCGCGTGTTTGACATCCTCAAGAGCAGAAATTTGAC  
CGTAGCTTTAAATGTACAAATTTCAAAACTTACCTCTGTTTCAGGTGGAGAATTCGAACCCAGCAAAATGGGATTTCAGAAATCG  
AAGCCTTTTGCCCAACTTGGAGTATACCGTGGTTTGGATAGCAAGGAAGTCTACTATCTGGCAAAATCTTTACGGTTCAAATGC  
ACCGAAAGTCTTTGCACTTGCTCACAGCTTGGAAACAAGCGCCAGGACTCAGCTTGGCAGATACTTTGTCCCTTCACTATGCAA  
TGCGCAATGAGTTGACTCTTAGCCAGTTGACTTCCTTCTCGTCGTACCAATCACATGCTCTTTATGCGTGATAGCTTGGATA  
GTATCGTTGAGCCAAATTTGGATGAAATGGGACGATTCTATGACTGGACAGAAGAAGAAAAAGCAACTTACCGTGCTGATGT  
CGAAGCAGCTCTCGCTAACAACGATTTAGCAGAATTAATAAATTA

4106.8 (SEQ. ID. NO. 216)

ATGATGAATGAATTATTTGGAGAAATTTCTAGGGACTTTAATCCTGATTCCTCTAGGAAATGGTGTTGTTGCAGGTGTGGTTCT  
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CTGGCAAGCTCAGTCCAGCTTATTTAAACCCAGCTGTGACCATCGGTGTGGCCTTAAAAGGTGGTTTGCCTTGGGCTTCCGTT  
TTGCCCTTATCTCTAGCCAGCTTCGCAAGGGCCATGCTGGTGCAGATTTTGGTTTGGTTCGAATTCAAACCTCACTATGAGGC  
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ATCCTTGGAACTTTTGTTTTGGTGTGACAATCTTTGCTTTGGGTCTTACGACTTTCAGGCAGGTATCGGAACCTTTGCAGTG  
GGAACTTTGATTGTGCGGTATCGGTCTATCACTAGGTGGGACCAACAGGTTATGCCTTGAACCCAGCTCGTGACCTTGGACCTCG  
TATCATGCACAGCATTTGCCAATTCCAAACAAGGAGACCGAGACTGGTCTTACGCTTGGATTCTCTGTTGTAGGCCCTGTTA  
TCGGAGCAGCCTTGGCAGTGGCTGTATTCTCACTTTTCTAG

4106.10 (SEQ. ID. NO. 217)

ATGAAAAGGACCTGGAGGAACTCATTCTGTGACAAATCTTAATACACCTTTTATGATTGGCAATATTGAGATTCCCAATCGTAC  
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AAATGGTCTCTGCAAGGGAATCCAATACAACACGAAACACCCCTGCACATGCTTCATATCGATGAGGCGGAAACCCCTG  
TCTTATCCAACTTTTGGTAGCGATGAAGACAGCCTAGCAGCGCAGCAAAATTCATCCAGAAAAACCAAGACCGATAT  
CGTCGATATCAACATGGGCTGCCCTCAACAAAATCGTGAAGAACGAAGCTGGTGCTATGTGGCTCAAGGATCCAGACAAG  
ATTTATCCCATCATCAACAAGGTCAGTCTGCTCTTGATATCCCACTTACTGTCAAAATGCGTACCGGCTGGGCGGACCCCAT  
TCTTGCAGTAGAAAAATGCTCTCGCTGCTGAAGCTGCAGGTTGTTCTGCCCTCGCCATGCATGGCCGTACCCCGTGAACAAATGT

ATACTGGCCACGCAGACCTTGAGACCCTTTACAAGGTTGCCAAGCTCTAACCAAGATTCCATTTCGCCAACGGTGATATC  
CGTACTGTCCAAGAAGCCAAGCAACGCATCGAAGAAGTTGGTGCTGACGCAGTCATGATTGGCCGAGCTGCCATGGGAAAT  
CCTTACCTCTTCAACCAAAATCAACCAATTACTTTGAAACAGGAGAAATCCTACCTGATTGACCTTTGAAGACAAGATGAAGAT  
CGCCTACGAACACTTGAACGATTGATTAACCTCAAAGGAGAAAACGTCGCAGTTCTGTGAATTCGCGGGTCTCGCTCCTCAC  
TATCTCCGTGGAAACATCTGGCGTGCCAACTCCGTGGAGCCATTTGCAAGCCAGCACCTTGGCAGAGATTGAAACCTCT  
TGCAATTGGAGAAGGCTTAA

4107.1 (SEQ. ID. NO. 218)

ATGACAAAGAAGAAAATTGAGCGTATTTCTGTAATACACCGAGAAAAGATTTTATGGCTCAAGTGGTATTTTCATGCGAGATA  
AAGAACAACCTAAGTATAGTGTCTTGGAGCGTAAAATGTTTGATGCTGCTAAAAATCAAGATATGCTAGCTTATCAAAAATA  
CGCAACTATCAAGCAGATAACAGATATTAGGGTACAAACAGTGAGGCTGACATTTTAGAGGCTGTAAAAGAGGTTTATGTG  
TACAATCACATGAATGTTATCGGAGCTTGTACGCGGATATTATTTATCAGTCAATCACCAGCTTATGATAAGTTAAATAAGTG  
GTTTAATATCTATTCTGATTGTATTTTAGCGTTGTACCCTTGCCCAAAATGGGGGTATATCATGAGATGGTAGGTATCTAG

4107.2 (SEQ. ID. NO. 219)

ATGAAAAATTCCAACGAGGCTGAGATGAAAATTACTTTATACTGATATTCGGACTTCTTTGACAGAAAATTCTAACAGAGAGG  
CAGAAGAGCTAGTTGACGCTGGCAAGCGGGTCTTCTACATTGCCCAAACTCTCTTTCTTTTGAAGGAACGCGCGTGCTG  
GAATACTTGTCCCAGCAGGCTTCTTTTTCGATTACCGTCACGCGCTTTGCTCAAATGGCTCGCTATCTGGTCTTGAATGATTTA  
CCAGCTAAAACTACTCTTGATGATATCGGTCTTGGGTTGGCCTTTTACAAATGCCTTGCCGAACCTCGATCCCAAGGACTTGGC  
TGTTTATGGCGCTATTAAGCAGGATCCTCAATTGATCCAGCAGTTAATTGAGCTTTACCATGAGATGACCAAAATCTCAGATGA  
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AATCAAGGTCAGTTAGCCCAAGGAAAGTCAGTTGCTCCATTTGATTGAGGCTATTGAGAAATGACAAGGTAAGTAGTGATTTTA  
ATCAAATCGCCTTGGTCATTGACGGCTTACTCGTTTCTGCTGAGGAAGAGCGGGTGTGGACTTACTTCACGGCAAAGGT  
TTGAGATTGTTATCGGGCTTATGTAGTAAGAAAAGCCTATACCAGTCTTTTAGCGAGGGCAATCTCTACCAAGCCAGCGT  
AAAATTTCTCCATCATCTGGCTTCTAAATACCAACGCGCTGCTCAGGACTGTTCTCAAACCTCATGAGAAGATGGATAGTTTG  
ACAAGGCCCTCTCGTTTGTGGAGTCTTCTATGACTTTTACAGAACTCGCTTTGGATGTGATGAGAAAAGACCGTGAAAAATTA  
CAAATCTGGTCTTGTGTTGACGCAAAAGGAGGAGTTGGAGCTAGTAGCCCGTAGTATTCTGTCAGAAAATTACATGAGAACTCAG  
ACCTGAGCTACAAGCATTTTCGTATTTCTTGGGGGATGTAGCTTCTTACCAGTTATCTCTCAAAACCATTTTTGACCAGTATC  
AGATTCTTTTTATCTTGGTAGAAGCGAAGCCATGGCTCATCATCCCTTGACTCAGTTTGTGCGAGTCTATTTAGCTTTAAAC  
GTTACCGTTTTCTGTCAGGAGGATTTGATTAATCTTCTAGAACTGATTTGTATACCTGACCTCAGTCAGTCTGATATTGATGCTT  
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AATCTTGAGCGTTTGAATGTCTCCGCTGAGAATTTTAGCACCTCTTGAAACCTCTTTGCCAGCCGAAAAACAAAAGGCTGA  
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CAATTACTGATTGCCAGCAGTGAAAAATCTCAAGAAAAATCGCTACACTATGCTATGCTTTCTTGGTCAATTCTGCTCGTAAGCAGTT  
GTTCTTGTGGCTCCAAGCCTTTTAAACGAAAGTGAAAGTAAGGAATCTGCCTATCTTCAAGAGTTGATCCATTTTGGATTTA  
GGCGGAGAGAGAAGAGGATGAATCACAAGGACTGTCTAAGGAGGATATGGGGTCTATCACAGTCTTTTGTCTAGTCTGGT  
TGCCTATCACAGCAGGCTGAGATGAGCGATACTGAGCAAGATTTGACTTTTGTCAAGGTTCTGTCGCGTGTATAGGTA  
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GCTCT  
CTATCTTGCCAAACAGGAGTTTACCTGTCTACGTGCGGTTTGACAGAGTTTTATCGCAATGAATACAGTTATTTCTCTACGCT  
ACGTTTTAGGCTTGCAGGAGGAATTACGTTTGCATCCTGATGCCGTAGTCACGGGAATTTCTTGCATCGTATCTTTGAACGC  
GCCTTACAGTTGCCTAATGAAGATTCTTTGACCAACGTCTAGAACAAGCTATTCAAGAAACCAAGTCAAGAACGCGAATTTG  
AAGCTATTTATCAAGAAAGTTTGAAGCCAGTTTACCAAGGAAGTTTGGCTTGATGTTGCACGGACAACCTGGACATATTCTC  
CGACAAATCCAGCCATCGAAACCAAGGAAAGAGCAAAATTTGGTGGAAGAACCAAGCCTTTATTTCAATTAGACAAT  
GGACGCAGTGTCTTTGTACGAGGCAAGGTGGACCGGATTGACCGTTTGAAGCTAATGGAGCGATAGGAGTAGTACTAC  
AAATCCAGTCTGACTCAGTTCCAGTTTCTCATTTCTTAAATGGGCTCAATTCTCAGTTACCAACCTATCTTGCTGCCCTAAAA  
AGAGAAGGGGAGCAGAACTTTTTCGGCGCCATGTACTTGAAATGGCTGAACCTGTCCAATCTGATGGCGGTAAGAAAGTC  
TGGCAGGAGCAGTGGTAGAAGCCAGCAAACTATGAAATACCAAGGGCTCTTCTTGGAAAAAGAAAGCAGTTATTTAGGCG  
AATTTTATAACAAAAACAAGGCTAATCAACTGACAGATGAGGAATTTAGCTCCTACTGGACTACAAATGCCTATCTTTACAA  
GAAAGCTGTGAGAAGATTTTAGCAGGCCGTTTCCGCTCAATCTTATACTGAAATGGCAGAAAGCATTGCCCATACGTC  
CAGCAACATCAGGCTATTACAGGCTTTGAAGCCAATTACCATCTGGGCCAAGCCGTTTCTAGAAAAGTTGGACCTAGCTG  
ATGGCAAGCGTCTGGTGGAGAAAAACTCAAGCAAGCTTGGCTTGAAAAATAA  
GAGAGGAGTTGAATCGATGA

4107.3 (SEQ. ID. NO. 220)

ATGAAGCTTATTCCCTTTTAAAGTGAGGAGGAGATTCAAAAACTGCAAGAAGCAGAAGCAAAATTCGAGCAAGGAACAGAAG  
AAAACCTGCGAGCAAAATCGAAGCTATCTACACTTCTGCCAGAAATATCTGGTCTCAGCATCGGCTGGTTCTGGAAAGACCT  
TTGTCTATGGCAGCGCATTTGGACCAATTGGCGGTGGTGTGAAATTTCTCAACTCTTTATCTCAACCTTTACCGTCAAG  
GCTGCAACTGAACTTAAAGAAGCTTTAGAGAAAAAAATCAGCAAGAAAAATCCAAGAAACAGATGATGTGACCTCAACAA  
CACTTGGGTGCGCAGTTGGCAGACCTACCCAACGCTGCCATTGGAACCATGGATTCTTTACACAAAAAATTCCTTGGCAAAAC  
ATGGTTATCTGCTTGATATTGCACCTAATTTCCGTATTTTACAAAACCAAGCGAGCAACTTATTTCTGAAAAACGAAGTCTTT  
CATGAGGTCTTTGAAGCGCATTTACCAAGGTAACAGAAAGAGACCTTTAGTCATTTGCTGAAAAACTTTGCTGGCGTGCGCA  
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TGAATCTTTCTCAAAGGATTTGAGAAAGCTGATTTTACCAGTGAAAAAGAAAACTGACCGAGCAAAATCAAAACAGCCCTT  
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TCTTAAGGAGAAAAACGGTCTGAGCTCTGACTAATGCCAGCGTAAGGCTGATTGAGCCCTGGCTGATGCCTACAACGA  
AGAGAGAAAGACCCAGTTTGTAACTAGGACAATTATCAGACCAGATAGCGAT

TCTCGACTATCAAGAACGTTATCATGGAGACACTTGGAACTAGCTAAACCTTCCAATCTTTTCATGAGCGATTGTTAGAGG  
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 AGAGGCTTTATACAGAGCCTATTCGATTGAAAAATTGAAAAATACTTGATTTTACTCGGTAAAGACGAGGTTCAAGTTGTA  
 AAAGTATAA

4109.1 (SEQ. ID. NO. 221)

ATGGAACCTTGCTCGCCATGCTGAAAGCTTGGGAGTAGATGCTATTGCAACGATTCCACCAATTTATTTCCGCTTGCCAGAATA  
 CTCAGTTGGCAAATATCGAAGCATATCAGTTCTGCAGCTCCAAACACAGACTACGTGATTTACAACATTCCTCAATTGGCAG  
 GGGTTGCTTTGACTCCAAGCCTTTACACAGAAATGTTGAAAAATCCTCGTGTTATCGGTGTGAAGAATCTTCTATGCCAGTT  
 CAAGATATCCAAACCTTTGTCAGCCTTGGTGGAGAGAAGACCATTCGCTTTAATGGTCTGATGAGCAGTTCTAGGAGGAC  
 GCCTCATGGGGGCTAGGGCTGGTATCGGTGGTACTTATGGTGCTATGCCAGAATCTTCTGAAACTCAATCAAGTTGATTGG  
 GATAAGGACCTAGAAACAGCGCGTGAATTCAGTATGCTATCAACGCAATCATTGGTAAACTCACTTCTGCTCATGGAATA  
 TGTACGGTGTCAATCAAGAAGTCTTGAAATCAATGAAGGCTTGAATATTGGATCTGTTGCTTCACCATTTGACACCAAGTACT  
 GAAGAAGATCGTCCAGTTGTAGAAGCGGCTGCTGCCTTGATTGCTGAAACCAAGGAGCGCTTCTCTAA

4110.2 (SEQ. ID. NO. 222)

ATGTATAAGACAAAGTGTTCAGAGAGAAGTTAGTATTATTTTTAAAAATTTCTTCCCAATCCTGATCTACCAATTTGCCAA  
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 AGGAAGAAGTTGCGTCTGATTTTACCAATTTATTTATTTGGCCTTGGGCTATCTGTGGTCTTGTGGGGATGGTACTTTCT  
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 GGGATTATCCCTTGTGCTCTTACGCTCATTCTGCTTGGTATCGTGGGCTTGACCAAACTGCTCATGTAACCTCATG  
 CTTTTGTTACTCCCTCTCAATAGCGGATTTAACTATCTCTTGATTACGGTGCCTTTGGTGTTCAGAACTGGGAGGGGCTGGT  
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 CCTTTACATTTTGGGGAAATGTGGCCAGTCTTTATGGTAACGACCAAAATTTATCGATTGACAGTGGCTTTTAACTTA  
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4112.2 (SEQ. ID. NO. 223)

ATGAGTACTTTAGCAAAAATAGAAGCGCTCTTGTTTGTAGCGGGTGAAGATGGGATTCGGGTCCGCCAGTTAGCTGAACCTC  
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 TTTGATTGAGACAAGTGGTCTTATAGATTGGTGAAGCAAGCTCAATTTGACAGAGATTTGAAGGAATACTCTAAGCGCCT  
 ATCAACCAAGAGCTTGTCTCGGGCTGCCCTTGAGACCTTGTCCATTATTGCCTACAAACAGCCGATTACGCGGATAGAAATTGA  
 TGCCATCCGTGGAGTTAACTCGAGTGGAGCCTTGCCAAAGTTGCAGGCTTTTGACCTGATAAAGGAAGACGGGAAAAAGGA  
 AGTATTGGGGCGCCCCAACCTCTATGTGACTACGGATTATTTCTAGATTACATGGGGATAAACCATTAGAAGAATTACCA  
 GTGATTGATGAGCTTGAGATTCAAGCCCAAGAAAGCCAATTTATTGGTGAAAGGATAGAAGAAGATGAGAATCAATAA

4113.1 (SEQ. ID. NO. 224)

ATGGATACGATGATTAGTAGATTTTTTCGCCATTTATTTGAAGCCTTAAAAAGTTTGAAACGAAATGGTTGGATGACAGTAGC  
 TGCTGTCAGTTGATGATGATTACTTTGACCTTGGTGGCAATATTTGCATCTGTTATTTCAATACAGCGAAACTAGCTACAG  
 ATATTGAAAAAATGTCCGTGTAGTATTATATCCGAAAGGATGTGGAAGATAATAGTCAGACAATTGAAAAAGAAGGTCA  
 AACTGTTACAAATAATGACTACCACAAGGTATATGATTCTTTGAAGAACATGTCTACGGTTAAAGGTGTTACCTTTTCAAGTA



AAGAAGAACATATGAAAAATTAACCGAGATAATGGGAGATAACTGGAAAAATCTTTGAAGGAGATGCCAATCCTCTCTATG  
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GGTTCAAGATGGCGGTGCCAATACAGAAAGACTCTTCAAGTTAGCTTCATTTATCCGTGTTTGGGGACTAGGGATTGCTGCTT  
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GCTTGGTGGAGCTAAAAACAGTTATATCCGTGGACCTTCTTGTAGAAGGAGCCTTTATCGGTTTATTGGGAGCTATCGCA  
CCATCTGTTTTGGTCTTTATTGTTTATCAAATTGTTTACCAATCTGTCAACAAATCGTTGGTAGGGCAAAATCTATCCATGATT  
AGTCCAGATTTATTTAGTCCGTTGATGATTGCCCTACTATTTGTGATTGGGGTTTTCATTTGGTTTATTGGGATCAGGAATATCC  
ATGCGCCGATTCTTGAAGATTTAG

4117.1 (SEQ. ID. NO. 225)

ATGAAGAAAAGTAAGATTTATTTTTTTAGCTCTGCTATTTTTCTTAGCTAGTCCAGAGGGTGCAATGGCTAGTGATGGTACTTG  
GCAAGGAAAACAGTATCTGAAAAGAGATGGCAGTCAAGCAGCAAAATGAGTGGGTTTTTGATACTCATTATCAATCTTGGTTC  
TATATAAAAGCAGATGCTAACTATGCTGAAAATGAATGGCTAAAGCAAGGTGACGACTATTTTTACCTCAAATCTGGTGGCT  
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GGTAGGAACTTCTATGTTGGTGCAACAGGTGCCAAAGTAAAGAGACTGGGTCTATGATTCTCAATACGATGCTTGGTT  
TTATATCAAAGCAGATGGACAGCAGCAGAGAGAAAAGAAATGGCTCAAATTAAGGGGAAGGACTATTATTTCAAATCCGGTGG  
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AACAAATACCAATCTTGGTTTTACATCAAAGAAAATGGAAGCTATGCTGATAAAGAATGGATTTTCGAGAATGGTCACTATTA  
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TAGGTGCAACCAAGTGGATTAAGGAAAATTATATCGATAGGGGAAGAAGCTTCTTTGGAAACAAGGCTTCTGGTATGAATGT  
GGAATATGCTTCAGACCCTTATTGGGGCGAAAAAATTGCTAGTGTGATGATGAAAATCAATGAGAAGCTAGGTGGCAAGA  
TTAG

4119.2 (SEQ. ID. NO. 226)

ATGAAAAAAGTATTACAAAAATATTGGGCATGGGCTTTTGTGGTCATCCCCCTCTTGTACAAGCAATTTTCTTCTATGTGCC  
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AGCTCCTCTTCATGGATCCAAAATTCATGAATGCGATTGGCTTTACCGCAATCATTGCGATTGCCATGGTGGTTGGTGAGATT  
GCACTCGGGATCTTCATTGCGCGTGTCTTGAATTTCTAAAAATCAAAGGCCAAACCTTCTTCCGTGCTTGGTTCTTCTTCCAGCT  
GTTTTATCTGGTTTGACAGTGGCTTTGATCTTCAAGCAAGTCTTCAACTACGGTCTTCCAGCGATTGGAATGCCCTTCATATT  
GAATTTTCCAAACCAAGCTCTTTTAGGGACTAAGTGGGGAGCAATCTTTGCGGCTGTCTTTGCTCTTTTGGCAAGGGGTGGC  
TATGCCCATCATCTCTCTAGCTGGTTTGAATCTATTCCAATCTATTCCAAATGAGATACAGAGGCAGCAAGGATTGATGGTGGCAT  
GCAAGCAAGTTTTCTGGAACATTGAATTGCCCTTACTTGCTACCAAGTGTCTCTATGGTCTTTATCCTAGCCCTAAAAGGTGGG  
CTGACTGCCCTTTGACCAAGTCTTTGCCATGACCGGTGGTGGTCCAAACAATGCCACAACCTCACTTGGGCTCTTGGTTTATAA  
CTATGCCCTTTAAAAACAACCAATTCGGTTATGCCAATGCCATTGCCGTAATCTTGTCTTCTTAATTGTAGTGATTTCGATCAT  
CCAATTGAGAGTATCTAAGAAATTTGAAATTTAA

4119.3 (SEQ. ID. NO. 227)

ATGATGAAACAAGATGAAAGAAAAGCCCTGATTGGCAAATACATTCTATTGATTCTAGGATCGGTTCTGATTTTATGTCCGC  
TCCTTGCTACCCTCTTTAGTTCTTCAAACCCACTAAGGATATTGTAGATAATTTCTTTGGCTTTCCAACCAACTTCACATGGG  
ACAACCTTAGCCGTCTCTTAGCTGATGGGATTGGAGGCTATTATTGGAACCTGTGCTCATCACTGTCTTGTCTTTACTTGCAG  
TAATGATCTTTATCCCTATGGCAGCCTACTCCATCGCTCGCAATAGTAAAAAGAAAAGCCTTTACCATCATGTATACCCTC  
TTAATCCTCGGAATCTTCGATACCTTTCCAAGTCATCATGATTCCGATTACGGTTATGATGAGTAAACTCGGTTTGGCTAATACC  
TTTGGTTTGTCTTGTCTACTTGACCTATGCGATTCCACAGACCCTTTTCTCTATGTTGGCTATATCAAATCTCGATTCCA  
GAAAGTCTGGATGAAGCAGCAGAGATCGATGGGGCTAATCAATTTACAACCTATTTCGCGATCATCTTCCCAATGATGAAAC  
CGATGCATGCGCAACCATGATCATCAATGCCCTTGGTTCTGGAATGACTTCATGTGTGCCACTCCTTGTCTTGAACCGGGAT  
TCCAAAATGTGGACTCTGCCCTTTGTTCCAATACAACCTACGAGGCCAATATTTCAACGACTACGGACCAAGCTTTGCCCTTAA  
CGTGGTCGGCATTATCAGTATCACCATTGTCTATCTCTTCTTCCAACGCCATATCATTTCAGGAATGAGCAACGGGGCAGTGA  
AGTAA

4119.4 (SEQ. ID. NO. 228)

ATGAAAAGTATTTTCAGAAAAATGGGGGAGCATCCGATGCTGCTTCTTTTTCTTAGCTATAGTACTGTTATATCCATTCTTGCA  
CAAAATTTGGATGGGCTTGTGGCTTCAGTAGGAATGTTTCTATTACTATTTCTTTTGGCACTATCAGTCGATTTTATCCCAT  
AAATTTCTTTGATTTGATTTTGCAGTTTGTCTTGTGGTAGTGTCTTGTGAGCTGCTTTTGGCAGTTTGAACATTTCCAAATTTG  
TGAAGAAATTTAACTATGCTTTTCTTCAACCAATATGCAAGGTGTGGCATCAGAACCGGGCAGAAAGTGACCTTCTTTAATCCT  
AATTATTATGGAATTTATTTGTTTCTGTATTATGATTGCTTCTTCTATCTGTTTACAACGACCAAGTTGAATTGGTTGAAAGTA  
TTCTGTGTGATTGCAAGCTTTGTTAACTCTTTTGTGTTTGAACCTTACTCAAAAATCGAACTGCCCTTCTGCTATTATCGCTGGA  
GCAATTATCTATCTCTTACGACTATTAATAAACTGGAAGGCCCTTTGGCTTAGTATTGGGGTCTTCGGGATTGGTTTGAAGTTTC  
CTCTTTTCTAGTGATTTGGGAGTTCAATGGGTACTTTAGACTCTTCTATGGAAGAACGCAATTTCTATCTGGATGCTGGGAT  
GGCCTTGTTTAAGCAAAATCCTTTTTGGGGTGAAGGCCATTGACCTATGAACCTTATCCTCGGATACGCTCTTATC  
ATGAACATGCCACAGCTTTTATATTGATACGATTCTGAGTTACGGAATTTGGGGGACTATTTTATTAGTTTTGTCTTCTGTTG  
CTCCTGTTCCGTTGATGATGGATATGAGTCAGGAGTCGGGGAACGTCGGAATTATCGGCCCTTATCTATCTTTCTTACAGTG



GTTGCTGTGCACGGAATTTTGGACTTGGCTCTCTCTGGAATCAGTCAGGCTTATTTTCTTGCTAGTTATGTGCAGTATTCCAT  
TGGAGCATCGAATGTTGGTATCGGACATGACCGATTAA

4120.1 (SEQ. ID. NO. 229)

ATGTCAAAGATGGATGTTTCAGAAAATCATTTGCCACCGATGATGAAGTTTGTGAATATGCGTGGCATTATAGCTCTAAAAGATG  
GGATGTTAGCAATTTTGGCATTGACAGTAGTTGGTAGTTTGTCTTGATTATGGGACAATTGCCGTTTCAAGGATTAAATAAG  
AGCATTGCTAGTGTCTTTTGGAGCTAATTGGACAGAGCCGTTTATGCAAGTATATTCAGGAACTTTGTCTATTATGGGTCTAAT  
TTCTTGTCTTTCAATTGCCTATTCTTATGCTAAGAATAGCGGAGTAGAGGCTTTACCAGCTGGAGTTCTATCTGTATCTGCATT  
CTTTATTTTGTCTAAGATCATCTTATATCCCTAAACAAGGTGAGGCGATTGGGGACGCTATTAGTAAAGTTTGGTTTGGAGGCC  
AAGGAATTATCGGTGCTATCATTATAGGTTTGGTAGTAGGAAGTATTTATACCTTCTTTATAAAGAGAAAAAATTGTTATTAAG  
ATGCCAGAAACAAGTTCCACAAGCTATTGCCAAAACAGTTTGAAGCAATGATTCCAGCATTGTAAATTTCTTATCTTCTATGAT  
TGTATATATTTAGCGAAGTCATTGACTAATGGCGGAACATTCATAGAAAATGATTTATTCTGCTATTCAAGTTCCGTTGCAAG  
GTTAACTGGATCTTTGTATGGTGCTATTGGAATTCGATTCTTTATATCATTTTTTGTGGTGGTTTGGTGTTCATGGGCAATCGG  
TAGTAAATGGAGTAGTGACGCTCTGCTTTTATCTAATCTTGATGCTAATAAAGCTATGTTAGCCTCTGCTAATCTATCATTA  
GAAAATGGTGCACATTTGTTACTCAACAATTTTAGATTCAATTTTAACTCTATCAGGTTTCAAGGATTACGTTTGGTCTTGTA  
GTTGCCATGCTTTTTCAGCAAAAATCAAAAACAATACCAAGCCTTAGGAAAAGTTGCAGCTTTTCCAGCAATATTTAACGTAA  
ATGAGCCAGTTGTATTTGGATTTCGATTGTCATGAATCCAGTTATGTTGTACCTTTCATTCTTGTTCCTGTACTTGCAGCTGT  
GATAGTATATGGAGCTATTGCAACAGGTTTCATGCAGCCATTCTCAGGGGTAACATTGCCTTGGAGTACACCAGCTATTTTAT  
CAGGATTTTGGTGGTGGATGGCAAGGAGTTTACTCAGCTGGTGATATTAGCGATGTCTACATTGGTTTATTTTCCATTCT  
TTAAAGTACAGGATCGTTTAGCTTACCAAAATGAAATCAACAATCTTAG

4121.2 (SEQ. ID. NO. 230)

ATGAAGAAAAAGGACTTAGTAGACCAACTAGTCTCAGAGATCGAGACGGGGAAAGTCAGGACACTGGGAATATACGGTCAT  
GGAGCTTCAGGTAAATCAACCTTTGCACAGGAATTGTACCAAGCTTTAGATTCTACTACAGTAAATTTGCTAGAGACAGATC  
CTTATATCACCTCAGGACGCCATCTGGTAGTACCAAGGACGCCCGGAATCAAAAAGGTGACAGCCAGTCTGCCAGTGGCGCA  
TGAAGTGGAGAGTTTGCAGAGAGATATCCTTgCTTGCAGCGGGTATGGATGTCTTGA

4122.1 (SEQ. ID. NO. 231)

ATGAAGAAAAAGATACCTAGTCTTGACAGCTTTGCTAGCCTTGAGTCTAGCAGCTTGTTCACAAGAAAAAACAACAAATGAAG  
ATGGAGAACTAAGACAGAACAGACAGCCAAAGCTGATGGAACAGTCGGTAGTAAGTCTCAAGGAGCTGCCAGAAAGAAA  
GCAGAAAGTGGTCAATAAAGGTGATTACTACAGCATCAAGGGAAATACGATGAAATCATCGTAGCCAACAAACACTATCCA  
TTGTCTAAAGACTATAATCCAGGGGAAAAATCCAACAGCCAAGGCAGAGTTGGTCAAACATCAAGGATGCAAGAGGCA  
GGTTTCCCTTAAATAAACAAGGAATCCAGTATTTAGAGTATGAACTCAGACCAAGCTCTATCAAGATTATGTCAACCAAGA  
TGGAAAGGCAGCAGCTGACCGTTACTCTGCCCGTCTGGCTATAGCGAACACCAGACAGGCTTGGCCTTTGATGTGATTGGG  
ACTGATGGTGATTGGTGACAGAAGAAAAAGCAGCCCAATGGCTCTTGGATCATGCAGCTGATTATGGCTTTGTTGTCCGTTA  
TCTCAAAGGCAAGGAAAAAGGAAACAGGCTATATGGCTGAAGAATGGCACCTGCGTTATGTAGGAAAAAGGCTAAAGAAAT  
TGCTGCAAGTGGTCTCAGTTTGAAGAATACTATGGCTTTGAAGCGGAGACTACGTCGATTAA

4125.6 (SEQ. ID. NO. 232)

ATGCGTAAATTCCTTAATTTTGTGCTACCAAGTTTGTGACCATTTCAAAAGTCGTTAGCACAGAAAAAGAGTCGTCTA  
TACTTCGAAAGAAATTTATTACCTTTCACAATCTGACTTTGGTATTTATTTTAGAGAAAAATTAAGTTCTCCCATGGTTTATGG  
AGAGGTTCTCTGTTTATGCGAATGAAGATTAGTAGTGGAATCTGGGAAATGACTCCCAAAAACAAGTTTCAATAACCGAG  
TGGCGTTTAAATAAACAAGGAATCCAGTATTTAGCTATCAAACTCATCAATTTATAGCTGCGGACAAACGATTTTATATGA  
TCAATCAGAGGTAACCTCAACAATAAAAAAAGTATGGTTAGAATCTGACTTTAACTGTACAATAGTCCTTATGATTTAAAA  
GAAGTGAATCATCCTTATCAGCTTATTCGCAAGTATCAATCGACAAGACCATGTTGTAGAAAGGAAGAGAATTTCTACATA  
TTGATCAGGCTGGATGGGTAGCTAAAGAATCAACTTCTGAAGAAGATAATCGGATGAGTAAAGTTCAAGAAATGTTATCTGA  
AAAATATCAGAAAGATTCTTCTCTATTATGTTAAGCACTGACTATGGAAAAAGAGCTGGTATCAATCAAGATGAAAAAG  
ATGTATGCAGCCAGCGTTTGAAGCTCTTATCTCTATTATACGCAAGAAAAATAAATGAGGGTCTTATCAGTTAGATAC  
GACTGTAAAAATACGTATCTGCAGTCAATGATTTTCCAGGTTCTTATAAACCAGAGGGAAGTGGTAGTCTTCTTAAAAAGAA  
GATAATAAGAAATATTCTTTAAAGGATTTAATTAAGCAAGTATCAAAAGAAATCTGATAATGTAGCTCATATTTGGGAT  
ATTACATTTCAAACCAATCTGATGCCACATTCAAATCCAAGATGTCTGCCATTATGGGAGATGATTGGGATCCAAAAGAAAA  
ATTGATTTCTTCTAAGATGGCCGGGAAGTTTATGGAAGCTATTATAATCAAAAATGGATTGTGCTAGAGTCTTTGACTAAAA  
CAGATTTTGATAGTCAGCGAATTGCCAAAGGTGTTCTGTTAAAGGTAG  
CTCATAAAATTTGAGATGCGGATGAATTTAAGCATGATACGGGTGTGTCTATGCAGATTCTCCATTTATTCTTTCTATTTTCA  
CTAAGAATCTGATTATGATACGATTTCTAAGATAGCCAAGGATGTTTATGAGGTTCTAAAATGA

4125.7 (SEQ. ID. NO. 233)

ATGAAAAAACAATAATGGTTTAAATAAAAATCCTTTTCTATGGTTATTTATTTATCTTTTCTTGTGACAGGATTCCAGTAT  
TTCTATTCTGGGAATAACTCAGGAGGAAGTCAGCAAACTCAACTATAGTGGTACAAGAAATACCGATGGTAATGTAA  
AAGAATTAACCTACCAACCAATGGTAGTGTTATCGAAGTTTCTGGTGTCTATAAAAAATCCTAAAAACAAGTAAAGAAAGAAC  
AGGTATTCAGTTTTCACGCCATCTGTTACTAAGGTAGAGAAATTTACCAGCACTATTCTTCTCGAGATACTACCGTATCAG  
AATTGCAAAAACCTTGCTACTGACCATAAAGCAGAAGTAACTGTTAAGCATGAAAGTTCAAGTGGTATATGGATTAATCTACT  
CGTATCCATTGTGCCATTGGAAATCTATTCTTCTTCTTCTATCTATGATGGGAAATATGGGAGGAGGCAATGGCCGTAATC  
CAATGAGTTTGGACGTAGTAAGGCTAAAGCAGCAAAATGAAGAAGATATTAAGTAAAGATTTTTCAGATGTTGCTGGAGTGTA  
GGAAGAAAAACAAGAACTAGTTGAAGTTGTTGAGTCTTAAAAAGATCCAAAACGATTACAAAACTGGAGCCCGTATTCCA  
GCAGGTGTTCTTTGGAGGGACCTCCGGGGACAGGTAAGTAACTTTGCTTGTCAAGGCAGTCGCTGGAGAAAGCAGGTGTTCCAT  
TCTTTAGTATCTCAGGTTCTGACTTTGTAGAAATGTTTGTGCGAGTTGGAGCTAGTCGTGTTCTGCTCTTTTGGAGATGCCA  
AAAAAGCAGCACCAGTATCATCTTTATCGATGAAATTTGATGCTGTTGGACGTCAACGTGGAGTTCGGTCTCGCGGAGGTAA  
TGACGAACGTGAACAAACCTTGAACCAACTTTGATTGAGATGGATGGTTTGGAGGAAATGAAGGGATTATCGTCATCGCT  
GCGACAAACCGTTCAGATGTACTTGACCCTGCCCTTTTGGCTCCAGGACGTTTGATAGAAAAGTATTGGTTGGTGTCTCTGA  
TGTTAAAGGTCGTGAAGCAATCTGAAAGTTACGCTAAGAATAAGC  
CTTTAGCAGAAGATGTTGATTTGAAATTTAGTGGCTCAACAACTCCAGGCTTTGTTGGTGCTGATTAGAGAATGTCTTGAAT  
GAAGCAGCTTTAGTTGCTGCTCGTCGCAATAAATCGATAATTGATGCTTCAGATATTGATGAAGCAGAAGATAGAGTTATTG  
CTGGACCTTCTAAGAAAGATAAGACAGTTTCACAAAAAGAACGAGAATTGGTTGCTTACCATGAGGCAGGACATACCATTGT

TGGTCTAGTCTTGTGCGAATGCTCGCGTTGTCCATAAGGTTACAATTGTACCACGCGGCCGTGCAGGCGGATACATGATTGCAC  
 TTCTAAAGAGGATCAAAATGCTTCTATCTAAAGAAGATATGAAAGAGCAATTGGCTGGCTTAATGGGTGGACGTGTAGCTGA  
 AGAAATATCTTTAATGTCCAAACACAGGAGCTTCAAACGACTTTGAACAAGCGACACAAATGGCACGTGCAATGGTTACA  
 GAGTACGGTATGAGTGAAAACTTTGGCCAGTACAATGAAGGAAACCATGCTATGCTTGGTGCACAGAGTCTCAAAAAT  
 CAATTTAGAAACAAACAGCTTATGAAATTGATGAAGAGGTTTCGTTCAATTATTAATGAGGCACGAAATAAAGCTGCTGAAAT  
 TATTCAGTCAAATCGTGAAACTCACAAGTTAATTGCAGAAGCATTATTGAAATACGAAACATTGGATAGTACACAAATTTAA  
 GCTCTTTACGAAACAGGAAAGATGCCTGAAGCAGTAGAAGAGGAATCTCATGCACTATCTATGATGAAGTAAAGTCAAAA  
 ATGAATGACGAAAAATAA

4125.10 (SEQ. ID. NO. 234)

ATGAGGGAACAGATTTTTTAAATCATTTTCTCAAGAAGGGGATATTTCAAAAAGCATGCTAAGGCGGTTCTAGCTCTTTCTGG  
 TGGATTAGATTCCATGTTTCTATTTAAGGTATTGTCTACTTATCAAAAAGAGTTAGAGATTGAATTGATTCTAGCTCATGTGA  
 ATCATAAGCAGAGAATTGAATCAGATTGGGAAGAAAAGGAATTAAGGAAGTTGGCTGCTGAAGCAGAGCTTCCTATTTATAT  
 CAGCAATTTTTCAGGAGAATTTTCAGAACGCGGTGCACGAAATTTTCGTTATGATTTTTTCAAGAGGTTCATGAAAAAGACAG  
 GTGCGACAGCTTTAGTCACTGCCACCATGCTGATGATCAGGTGGAACGATTTTTATGCGCTTGATTGAGGAAGTCTCGTTG  
 CGCTATCTACGGAATTAAGGAGAAGCAAGTAGTCGGAGAGATAGAAATCATTCGTCCTTCTTGCAATTTTCAGAAAAAAG  
 ACTTTCCATCAATTTTCACTTTGAAGATACATCAAAATCAGGAGAATCATTATTTTCGAAATCGTATTCGAAATCTTACTTAC  
 CAGAAATTGGAAGAAAATCCTCGATTTAGGGATGCAATCTTAGGCATTGGCAATGAAATTTAGATTATGATTTGGCAAT  
 AGCTGAATTATCTAACAAATTAATGTGGAAGATTACAGCAGTTATTTTCTTACTCTGAGTCTACACAAAGAGTTTACTTC  
 AAACCTTATCTGAATCGTTTTCAGATTGAATCTTACAAAAGCTCAGTTTGTCTGAAGTTCAGCAGATTTTAAATCTAAAAGC  
 CAGTATCGTCATCCGATTAATAATGGCTATGAATTGATAAAAGAGTACCAACAGTTTCAGATTGTAAATCAGTCCGCGAGG  
 CTGATGAAAAGGAAGATGAACCTTGTGTACACTACAAAATCAGGTAGCTTATCAAGGATATTTATTTCTTTTGGACTTCCA  
 TTAGAAGGTGAATTAATTCACAAATACCTGTTTACGCTGAAACATCCATACACATTCGTCATCGAAAAACAGGAGATGTTT  
 TGATTAATAATGGGCATAGAAAAAACTCAGACGTTTATTTATTG  
 ATTTGAAAATCCCTATGGAAGAGAGAACTCTGCTCTTATTATTGAGCAATTTGGTGAAATTGTCTCAATTTTGGGAATTGCG  
 ACCAATAATTTGAGTAAAAAACGAAAAATGATATAATGAACACTGTACTTTATATAGAAAAATAGATAGGTAA

4126.1 (SEQ. ID. NO. 235)

ATGAAGCGTTCTTCTCTTTTAGTTAGAATGGTTATTTCCATCTTTCTGGTCTTTCTCATTTCTCCTAGCTCTGGTTGGAACCTTCT  
 ACTATCAATCAAGTTCTTCAGCCATTGAGGCCACCATTTGAGGGCAACAGCCAAACGACCATCAGCCAGACTAGCCACTTTAT  
 TCAGTCTTATATCAAAAACTAGAAACACCTCGACTGGTTTGACCCAGCAGACGGATGTTCTGGCCTATGCTGAGAATCCC  
 AGTCAAGACAAGGTGAGGGAATCCGAGATTTGTTTTGACCATCTTGAAAGTCAGATAAGGACTTGAAAACTGTTGTGCTGG  
 TGACCAAAATCTGGTCAGGTCAATTTCTACAGATGACAGTGTGCAGATGAAAACTTCCTCTGATATGATGGTGAAGTTGGTA  
 CCAAAAGGCCATTCATCAGGGAGCTATGCCTGTTTTGACTCCAGCTCGTAAATCAGATAGTCAAGTGGGTCAATTTCTGTCACTC  
 AAGAATTTGTTGATGCAAGGGAGCCAATCTTGGTGTGCTTCGTTGGATATTTCTTATGAAACTCTGGAAGCCTATCTCAAT  
 CAACTCCAGTTGGGGCAGCAGGGCTTTGCCTTCATTATCAATGAAAACCATGAATTTGTCTACCATCTCAACACACAGTTTA  
 TAGTTCTGTAGCAAAATGGAGGCTATGAAACCTACATCGATACAGGTCAGGGTTATACTCCTGGTCACAAATCTTACGTC  
 AGTCAAGAGAAGATTGCAGGAAGTGGACGGTGTCTGGCGTGTCTCATTGGAAAAGTTAGACCAGGTTCCGAGTCAGC  
 TCTTGTGGACCTTGTCTGGGGCCAGTGTACATCTCTTCTGTCTGTCTGCTTATGTTGGTTCACTTAAACGCTGGATTG  
 CTCCTTTGAAGGATTTGAGAGAAACCATGTTGGAATTTGCTTCTGGTGTCTCAAAATCTTCGTGCCAAGGAAGTTGGTCCCTAT  
 GAAGTGAAGAGAAGTAACTCGCCAATTTAATGCTATGTTGGATCAGATTGATCAGTTGATGGTAGCTATTCGTAGCCAGGAAG  
 AAACGACCCGTCAGTACCAACTTCAAGCCCTTTTCGAGCCAGATTAATCCACATTTCTCTATAACACTTTGGACACCATCATC  
 TGGATGGCTGAATTTATGATAGTCAGCGAGTGGTGCAGGTGACCAAGTCTTGGCAACCTATTTCCGCTTGGCGCTCAATCA  
 AGGCAAGGACTTGATTTGTCTCTCTGACGAAATCAATCATGTCCGCCAGTATCTCTTATCCAGAAACAACGCTATGGAGATA  
 AGCTGGAATACGAAATTAATGAAAATGTTGCCTTTGATAATTTAGTCTTACCCAAGCTGGTCTACAACCCCTTGTAGAAAAT  
 GCTCTTTACCATGGCATTAAAGGAAAAGGAAGGTACAGGGCCATATTAACCTTTCTGTCCAGAAACAGGATTGGGATTGGTCA  
 TCCGATTGAGGATGATGGCGTTGGCTTCCAAGATGCTGGTGATAGTAGTCAAAGTCAACTCAAACGTTGGGGAGTTGGTCT  
 TCAAAATGTGATCAACGGCTCAAACCTCATTTTGGAGCCAATTACCATATGAAGATTGATTCTAGACCCCAAAAAAGGGACG  
 AAAGTTGAAATATATATAAATAGAATAGAACTAGCTAA

4126.7 (SEQ. ID. NO. 236)

ATGAAGCGTTCTTCTCTTTTAGTTAGAATGGTTATTTCCATCTTTCTGGTCTTTCTCATTTCTCCTAGCTCTGGTTGGAACCTTCT  
 ACTATCAATCAAGTTCTTCAGCCATTGAGGCCACCATTTGAGGGCAACAGCCAAACGACCATCAGCCAGACTAGCCACTTTAT  
 TCAGTCTTATATCAAAAACTAGAAACACCTCGACTGGTTTGACCCAGCAGACGGATGTTCTGGCCTATGCTGAGAATCCC  
 AGTCAAGACAAGGTGAGGGAATCCGAGATTTGTTTTGACCATCTTGAAAGTCAGATAAGGACTTGAAAACTGTTGTGCTGG  
 TGACCAAAATCTGGTCAGGTCAATTTCTACAGATGACAGTGTGCAGATGAAAACTTCCTCTGATATGATGGTGAAGTTGGTA  
 CCAAAAGGCCATTCATCAGGGAGCTATGCCTGTTTTGACTCCAGTTCGTAATCAGATAGTCAAGTGGGTCAATTTCTGTCACTC  
 AAGAATTTGTTGATGCAAGGGAGCCAATCTTGGTGTGCTTCGTTTGGATATTTCTTATGAAACTCTGGAAGCCTATCTCAAT  
 CAACTCCAGTTGGGGCAGCAGGGCTTTGCCTTCATTATCAATGAAAACCATGAATTTGTCTACCATCTCAACACACAGTTTA  
 TAGTTCTGTAGCAAAATGGAGGCTATGAAACCTACATCGATACAGGTCAGGGTTATACTCCTGGTCACAAATCTTACGTC  
 AGTCAAGAGAAGATTGCAGGAAGTGGACGGTGTCTGGCGTGTCTATTCATTGGAAAAGTTAGACCAGGTTCCGAGTCAGC  
 TCTTGTGGACCTTGTCTGGGGCCAGTGTACATCTCTTCTGTCTGTCTGCTTATGTTGGTTCACTTAAACGCTGGATTG  
 CTCCTTTGAAGGATTTGAGAGAAACCATGTTGGAATTTGCTTCTGGTGTCTCAAAATCTTCGTGCCAAGGAAGTTGGTCCCTAT  
 GAAGTGAAGAGAAGTAACTCGCCAATTTAATGCTATGTTGGATCAGATTGATCAGTTGATGGTAGCTATTCGTAGCCAGGAAG  
 AAACGACCCGTCAGTACCAACTTCAAGCCCTTTTCGAGCCAGATTAATCCACATTTCTCTATAACACTTTGGACACCATCATC  
 TGGATGGCTGAATTTATGATAGTCAGCGAGTGGTGCAGGTGACCAAGTCTTGGCAACCTATTTCCGCTTGGCGCTCAATCA  
 AGGCAAGGACTTGATTTGTCTCTGACGAAATCAATCATGTCCGCCAGTATCTCTTATCCAGAAACAACGCTATGGAGATA  
 AGCTGGAATACGAAATTAATGAAAATGTTGCCTTTGATAATTTAGTCTTACCCAAGCTGGTCTACAACCCCTTGTAGAAAAT  
 GCTCTTTACCATGGCATTAAAGGAAAAGGAAGGTACAGGGCCATATTAACCTTTCTGTCCAGAAACAGGATTGGGATTGGTCA  
 TCCGATTGAGGATGATGGCGTTGGCTTCCAAGATGCTGGTGATAGTAGTCAAAGTCAACTCAAACGTTGGGGAGTTGGTCT  
 TCAAAATGTGATCAACGGCTCAAACCTCATTTTGGAGCCAATTACCATATGAAGATTGATTCTAGACCCCAAAAAAGGGACG  
 AAAGTTGAAATATATATAAATAGAATAGAACTAGCTAA

4127.4 (SEQ. ID. NO. 237)

ATGTTTTTTAAATTATTAAGAGAAGCTCTTAAAGTCAAGCAGGTTTCGATCAAAAAATTTTATTACAATTTTATCGTTTTGGTC  
 TTTTCGATCGGAAC TAGCATTACAGTTCTCGGTGTGAATGCCAATAGCTTGAATGCTTTAAGTGGATTATCCTTCTTAAACAT  
 GTTGAGCTTGGTGTGCGGGAATGCCCTAAAAAACTTTTCGATTTTGGCCCTAGGAGTTAGTCCCTATATCACCGCTTCTATTGT  
 TGTCACACTCTTGCAAAATGGATATTTACCAAGTTTGTAGAGTGGGGTAAACAAGGGGAAGTAGGTGCAAGAAAAATTGAAT  
 CAAGCTACTCGTTATATTGCTCTAGTTCTCGCTTTTGTGCAATCTATCGGGATTACAGCTGGTTTTAATACCTTGGCTGGAGCT  
 CAATTGATTA AAAACTGCTTTAACTCCACAAGTTTTCTGACGATTGGTATCATCTTAACAGCTGGTAGTATGATTGTCACCTTGG  
 TTGGGTGAGCAAAATACAGATAAGGGATACGGAAACGGTGTTCATGATTATCTTTGCCGGGATTGTTCTCAATTCCAGA  
 GATGATTACGGGCATCTATGTGGACTACTTTGTGAACGTCCCAAGTAGCCGTATCACTTCATCTATCATTTTCGTAATCATTTT  
 GATTATTACTGTATTGTTGATTATTTACTTTACAACCTATGTTCACAACAGCAGAATACAAAAATCCAAATCCAAATATACTAAGG  
 TTGCACAAGGTGCTCCATCTAGCTCTTACCTTCCGTAAAAAGTAAACCCTGCTGGAGTTATCCCTGTTATCTTTGCCAGTTCTGA  
 TTAATGTCAGCGCTGCGGCTATTCTTCAGTTTTTGTAGTGCCACAGGTCATGATTGGGCTTGGGTAAGGGTAGCACAAGAGATG  
 TTGGCAACTACTTCTCCAACGGTATTGCCATGTATGCTTTGTTGATTATTCTCTTACATTCTTCTATACGTTTGTACAGATTA  
 ATCCTGAAAAAGCAGCAGAGACCTACAAAAGAGTGGTGCCTATATCCATGGAGTTCTGCTCGGTAAAGGTACAGAAGAATA  
 TATGTCTAAACTCTTCGTCGCTTGTCAACTGTTGGTCCCTCTTCTTGGTGTGA

4127.5 (SEQ. ID. NO. 238)

ATGGATATTAGACAAGTTACTGAAACCATCGCCATGATTGAGGAGCAAACTTCGATATTAGAACCATTACCATGGGGATT  
 CTCTTTTGGAGTATCGATCCAGATATCAATCGTGTGCGGAGAAAAATCTCAAAAAATTACGACAAAGCGCGCTAATTT  
 AGTAGCTGTTGGTATGAAATTGCGGCTGAGTTGGGAATTCCTATCGTTAATAAGCGTGTATCGGTGACACCTATTTCTCTGA  
 TTGGGCGACGACAGATGCGACGGAAGTACGTGGTTCTGGCAAAAGCGCTTGATAAGGCTGCGAAAGAGATTGGTGTGGACT  
 TTATTGGTGGTTTTCTGCTTAGTACAAAAAGGTTACAAAAGGGAGATGAGATTCTCATCAATTCCTTCTCGCGCTTTG  
 GCTGAGACGGATAAGGTCTGCTCAGTCAATATCGGCTCAACCAAGTCTGGTATTAAATATGACGGCTGTGGCAGATATGG  
 GACGAATTATCAAGGAAACAGCAATCTTTCAGATATGGGAGTGGCCAAGTTGGTGTATTCTGCTAATGCTGTTGAGGACAA  
 TCCATTTATGGCGGGTGCCTTTCATGGTGTGGGGAAGCAGATGTTATCATCAATGTGCGGAGTTCTGGTCTGGTGTGTGA  
 AACGTGCTTTGGAAAAAGTTGCTGGACAGAGCTTTGATGTAGTAGCCGAAACAGTTAAGAAAACTGCCTTTAAAAATCACTCG  
 TATCGGCTCAATTTGGTCAAAATGGCCAGTGAGAGACTGGGTGTGGAGTTTGGTATTGTGGACTTGAGTTTGGCACCACCC  
 CCTGCGGTTGGAGACTCTGTGGCAGTGTCTTGAGGAAATGGGGCTAGAAACAGTTGGCAGCGATGGAACGACGGCTGCCT  
 TGGCCCTCTTGAACGACCAAGTTAAAAAGGGTGGAGTGATGGCCTGCAACCAAGTGGTGGTTTATCTGGTGCCTTTATCCCT  
 GTTCTGAGGATGAAGGAATGATTGCTGCAAGTCAAAAATGGCTCTTCTAATTTAGAAAACTAGAAGATATGACGGCTATCT  
 GTTCTGTTGGATTGGATATGATTGCCATCCCAGAAGATACGCTGCTGAACTATTGCGGCTATGATTGCGGATGAAGCAGC  
 AATCGGTGTTATCAACATGAAAAACAACAGCTGTTGCTATCAATCCCAAGGAAAAAGAGGCGATATGATTGAGTTTGGTGGT  
 CTATTAGGAACCTGACCCGTTATGAAGGTTAATGGGGCTTCGTCTGTCGACTTCATCTCTCGCGGTGGACAAATCCCAGCACC  
 AATTCATAGTTTTTAAAAATTA

4128.1 (SEQ. ID. NO. 239)

ATGACACAGATTATTGATGGGAAAGCTTTAGCGGCCAAATTGCAGGGGAGTTGGCTGAAAAGACTGCAAAATTAAGGAA  
 GAAACAGGTCTAGTGCCTGGTTTGGTAGTGATTTGGTTGGGACAATCCAGCCAGCCAAGTCTACGTTGCGCAACAAGGAGA  
 GGTCAGCCCTTGGCGGCTGGTTTCCGTAGCGAAGTAGTACGGGTTCCAGAGACCATTACTCAAGAGGAATTGTAGACCTGAT  
 TGCTAAATACAATCAGGATCCAGCTTGGCATGGGATTTTGGTTCAGTTGCCATTACCAAAACACATTGATGAAGAGCGGTT  
 CTATTGGCTATTGACCCAGAAAAAGGATGTGGATGGTTTCCATCCTTAAACATGCGGGCTCTTTGGTCTGGTCTATCCAGTCAT  
 GATTCTTTCGACACCGGCAGGAATTATGGAATGTTCATGAATATGGGATTGACTTGGAAAGTAAAAATGCAGTCGTCATC  
 GGTGATCCCAATATTGTCGGAAGAACCTATGGCCAGCTTCTTTGGCAAGAATGCAACAGTAACCTTGACTCACTCAGCTAC  
 TCATAATCTTTCCAAAGGTGGCTGCAAAAGCAGATATTTGGTTGTTGCAATTCGTCGTCGCAAGTTTGTGACTGCTGACTTTG  
 TCAAAACAGGTGCGGTAGTCATTGACGTTGGGATGAACCGCGATGAAAATGGTAAGCTCTGTGGGGATGTTGATTATGAGGC  
 GGTGTCGCCCACTTGCTAGCCACATTACGCCAGTCCCTGGAGGTGTCGGTCTATGACCATTACTATGCTGATGGAGCAACCT  
 ATCAGGCAGCACTTAGGACATTGGATAGAAAAATA

4128.2 (SEQ. ID. NO. 240)

ATGCTAAATTTAATCGTATTCAATTTGGTGGTACTGGATTCTGTAGGAATCGGTGCAGCACCAGATGCTAATAACTTTGTCAA  
 TGCAGGGTTCCAGATGGAGCTTCTGACACACTGGGACACATTTCAAAAAACAGTTGGTTTGAATGTCCCAACATGGCTAAA  
 ATAGGTCTTGGAAATATTCCTCGTGAAACTCCTCTTAAGACTGTAGCAGCTGAAAGCAATCCAAGTGGATATGCAACAAAAAT  
 TAGAGGAAGTATCTCTTGGTAAGGATACTATGACTGGACACTGGGAAATCATGGGACTCAACATTACTGAGCCTTTCGATAC  
 TTTCTGGAACGGATTCCCAGAAAGAAATCCTGACAAAAATCGAAGAATTCTCAGGACGCAAGGTTATTCGTGAAGCCCAACAAA  
 CCTATTTCAGGAACGGCTGTTATCTATGATTTTGGACCACGTGAGATGGAAACTGGAGAGTTGATTATCTATACCTCAGCTGA  
 CCCTGTTTTCAGATTGCTGCCCACGAAGACATTATTCCTTTGGATGAATTGTACCGTATCTGTGAATACGCTCGTTCGATTAC  
 CCTTGAGCGCTCCTGCCCTTCTTGGTCCGATCATTTGCTCGCCCTTATGTAGGTGAACAGGTAACCTTCACTCGTACGGCAACCC  
 GTCGTGACTTGGCTGTATCTCCATTTTCCCAACTGTTTGGATAAATTGAATGAGGCTGGTATCGATACTTATGCTGTGGGTA  
 AAATCAACGATATCTTTAACGGTGTGGTATCAACCATGACATGGGTGCAACAAAGTCAAATAGTCATGGAATTGATACACT  
 ATTGAAGACTATGGGACTTGGCTGAGTTTGAAGAAAGGATCTCAATTCACAAACCTAGTTGACTTTGATGCCCTTACGGCCATC  
 GTCGTAATGCTCACGGTTACCGTGATTGCTTGCATGAGTTTGTAGTGAACGCTTACCTGAAATTATCGCAGCTATGAGAGAGAAT  
 GACCTTCTCTTGATTACTGCGGACCATGGAATGACCAACGTATGCAAGAACGGATCACACTCGGGGAATATATTCATTGTT  
 GGCCTATAGCCCTGCCTTTAAAGGAAATGGTCTCATTCAGTAGGACATTTTGCAGATATTTACGCGACTGTTGCCGATAACT  
 TTGGTGTGGAAACTGCTATGATTGGGGAAAGTTTCTTAGATAAATTTGGTATA

4129.2 (SEQ. ID. NO. 241)

ATGTTTATTTCCATCAGTGCTGGAATTGTGACATTTTACTAACTTTAGTAGAAATCCGGCCTTTATCCAATTTTATAGAAAG  
 GCGCAAAATTACAGGCCAGCAGATGCATGAGGATGTCAAAACAGCATCAGGCAAAAGCTGGGACTCCTACAATGGGAGGTTTG  
 GTTTTCTTGAATCTTCTGTTTGGTTGCTTCTTTTTCGCCCTATTAGTAGCCAATTCAGCAATAATGTGGGAATGATTTTGT  
 TCATCTTGGTCTTGTATGGCTTGGTTCGGATTTTATAGATGACTTTCTCAAGGTCTTTCGTAAAAATCAATGAGGGGCTTAATCCTA  
 AGCAAAAAATTAGCTCTTCAGCTTCTAGGTGGAGTTATCTTCTATCTTTCTATGAGCGCGGTGGCGATATCTGTCTGTCTTTG  
 GTTATCCAGTTTCATTTGGGATTTTCTATATTTCTTCGCTATTTTCTGCTAGTCCGTTTTTCAACAGCAGTAAACTTGACAGA  
 CGGTGTTGACGGTTTACGTAGTATTTCCGTTGTGATGTTTGTCTGCCATGGAGTTATTGCTATGTGCAAGGTGAGATGG  
 ATATCTTCTAGTATCTTGGCATGATTGGTGGTTTGTCTCGGTTTCTTCATCTTTAACCATAAGCCTGCCAAGGTCTTTATGG  
 GTGATGTGGGAAGTTTGGCCCTAGGTGGGATGTGGCAGCTATCTCTATGGCTCTCCACCAAGAATGGACTCTCTTGATTATC

GGAAATGTGTATGTTTTGAAACAACCTCTGTTATGATGCAAGTCAGTTATTTCAAACCTGACAGGTGGTAAACGTATTTCCG  
TATGACGCCTGTACATCACCATTGAGCTTGGGGGATTGTCTGGTAAAGGAAATCCTTGGAGCGAGTGGAAGGTTGACTTCT  
TCTTTGGGGAGTGGGACTTCTAGCAAGTCTCCTGACCCTAGCAATTTATATTTGATGTAA

4133.1 (SEQ. ID. NO. 242)

TTGTTTAAGAAAAATAAGACATTCTTAATATTGCATTGCCAGCTATGGGTGAAAACCTTTTTGCAGATGCTAATGGGAATGGT  
GGACAGTTATTTGGTTGCTCATTAGGATTGATAGCTATTTTCAGGGGTTTCAGTAGCTGGTAATATTATCACCATTTATCAGG  
CGATTTTCATCGCTCTGGGAGCTGCTATTTCCAGTGTATTCCAGTATAGGGCAGAAAGACCAGTCGAAGTTGGCCTAT  
CATGTGACTGAGGCGTTGAAGATTACCTTACTATTAAGTTTCTTTTAGGATTTTTGTCCATCTTCGCTGGGAAAGAGATGAT  
AGGACTTTTGGGGACGGAGAGGGATGTAGCTGAGAGTGGTGGACTGTATCTATCTTTGGTAGGCGGATCGATTGTTCTCTTA  
GGTTAATGACTAGTCTAGGAGCCTTGATTTCGTGCAACGCATAATCCACGCTGCCTCTCTATGTTAGTTTTTTATCCAATGCC  
TTGAATATTTCTTTTTCAAGTCTAGCTATTTTGTCTGGATATGGGGATAGCTGGTGTGCTTGGGGGACAATTGTGTCTCGT  
TTGGTTGGTCTTGTGATTTTGTGGTCACAATTAATAACTGCCTTATGGGAAGCCAACCTTTTGGTTAGATAAGGAACTGTTGAC  
CTTGGCTTTACACAGCAGCTGGAGAGCGACTTATGATGAGGGCTGGAGATGTAGTGATCATTTGCCTTGGTCTTCTTTTGGGA  
CGGAGGCAGTTGCTGGGAATGCAATCGGAGAAGTCTTGACCCAGTTTAACTATATGCCTGCCTTTGGCTGCCTACGGCAAC  
GGTCAGTTGCTTGGCCGACAGCTTGGAGAGGATTGTGAAAGTATCTCTATTTGAGTAAACAAACCTTTTGGCTTTCT  
CTGTTCTCATGTTGCCCTGTCTTTAGTATATATGCTTGGGTGTACCATAACTCATCTCTATACGACTGATTCTCTAGCG  
GTGGAGGCTAGTGTCTAGTGACACTGTTTCACTACTTGGGACCCCTATGACGACAGGAACAGTCATCTATACGGCAGTCTG  
GCAGGGATTAGAAATGCACGCCCTCCCTTTTATGCGACAAGTATAGGAATGTGGTGTATCCGCATTGGGACAGGATATCTG  
ATGGGGATTGTGCTTGGTTGGGGCTTGCCTGGTATTTGGGCAGGGTCTCTCTTGGATAATGGTTTTGCTGGTATTTCTACGC  
TATCGTTACCAGCGCTATATGAGCTTGAAAGGATAG

4135.2 (SEQ. ID. NO. 243)

ATGCAAACTCAAGAAAAACACTCGCAAGCAGCCGTTCTTGGCTTGCACTTACTAGCCATGTACTCAGGATCTATCCTGG  
TTCCCATCATGATTGCGACAGCCCTTGCTATTACAGCTGAGCAGTTGACCTACCTGATTTCTACAGATACTTTCATGTGTGGG  
TGGGCAACCTTCTCCAACTCAACAAATACCTTTGGGATTGGACTCCAGTCGTTCTTGGAGTTGCATTCCAGTCGGT  
CGCTCCCTTGAATTGATTGGGCAAGCCATGGTAGTGGCGCTATGTTTGGTGGCCTTATCGCATCTGGGATTACGTGGTTC  
TTGTTTCAGGCATCTTCTCAAAAGTAGCCAATCTCTTCCCATCTATCGTAACAGGATCTGTTATTACCACGATTGGTTTAACT  
TGATCCCTGTGCTGATTGGAAATATGGGAAATAACGTTCCAGAGCCAACCTGGTCAAAGTCTCTTGCCTTGACGCTATTACTGT  
CTGATTATCTCTTGGCCGACATCTTTACCAAGGATTGTGAAAGTATCTCTATTTTATTGGTGTGTTGTTGGAAGTCTG  
ATTGCTGCTACTATGGGCTTGGTGGACTTCTCTCTGTTGCGGTAGCTCCACTTGTCCATGTCCCAACTCCACTCTACTTTGGG  
ATGCCAACCTTTGAAATCTCATCTATTTGTCATGATGTATCATCGCAACGGTGTCTATGGTTGAGTCAACTGGTGTATCTG  
GCCTTGTCTGATATCAAAAGGATCCAATCGACAGCAGCGCTTCGCAACGGATACCGCGCAGAAGGTTTGGCCGACTTC  
TCGGAGGAATCTTTAACACCTTCCCTTACACCGGATTTTCAAAAACGTTGGTTTGGTTAAATTGTGAGGCATCAAAAAACGC  
CTGCCAATCTACTACGACGCTGGTTTCTGTTCTCTTGGACTGCTTCCCTAAGTTTGGCGCCCTTGCCCAATCATTCCAAGC  
TCCGCTCTCGGTGGTGCCATGCTGGTAATGTTTGGTTTGTATCAATTCAAGGGATGCAATCCTCGCCCGTGTGACTTTGCT  
AACAATGAACACAACCTTCTTATCGCAGCTGTTTACCTCGCTGCAGGTGTGCGTCTCAACAACAGTAATCTCTTTGTCAGCAT  
GCCGACAGCCTTCCAATGTTCTTCTCAAACGGAATCGTCGTAGCCAGCCTACTCGCTATTGCTCTCAATGCCGTATTAATC  
ATAAAAAGAAATAA

4136.2 (SEQ. ID. NO. 244)

ATGAAAGATAGAATAAAAGAATATTTACAAGACAAGGGAAAGGTGACTGTTAATGATTGGCTCAGGCTTTGGGAAAAGAC  
AGTTCCAAGGATTTTCGTGAGTTGATTAAAACTTGTCTTAATGGAAAGAAAGCACCAAAATTCGTTTTGAAGAAGATGGTA  
GTCTGACATTAGAAATTAAGAAAAACATGAGATTACCTCAAGGGGATTTTTCATGCCCAATAAAATGGCTTTGGCTTTGTT  
AGTCTGGAAGGCGAGGAGGACGACCTTTTGTAGGGAAAAATGATGTCAACTATGCTATTGATGGTGATACCGTCGAGGTAG  
TGATTAAAGAAAGTCGCTGACCGCAATAAGGGAAACAGCAGCAGAGCCAAATATTGATATCCTAGAACACAGTTTGACAA  
CAGTTGTGCGGCAAAATCGTTCTGGATCAGGAAAAACCTAAGTATGCTGCTATATTCTGTTCAAAAAATGCAAAAGTCA  
ACCGATTATTTAGTAAAGAAACGCCCTAAAATTAGAAGGAACAGAAAGTTCTCAAAGTCTTTATCGATAAAATACCCAAGCAAG  
AAACATGATTTCTTTGTCGCGAGTGTTCTCGATGTAGTGGGACACTCAACGGATGTGCGGAATTGATGTTCTTGAGGTCTTGA  
ATCAATGGACATGTATCCGAGTTTCCAGAAGCTGTTGTTAAGGAAGCAGAAAGTGTGCTGATGCTCCGTCTCAAAAGGAT  
ATGGAAGTGTGCTGATGATTAAGAGATGAAATTACCTTTACCATTTGACGGTGGGATGCCAAGGACTTGGACGATGCAGTGC  
ATATCAAGGCTCTGAAAAATGGCAATCTGGAGTTTGGGGTTCACATCGCAGATGTTTCTTATTATGTGACCGAGGGGTCTGCC  
CTTGACAAGGAAGCCCTTAACCGTGCGACTTCTGTTTACGTGACAGACCGAGTGGTGCCAAATGCTTCCAGAACGACTATCAA  
ATGGCATCTGCTCTCAATCCCAAGTTGACCGCCTGACCCAGTCTGCTATTAT  
GGAGATTGATAAACATGGTGTGTTGTTCAACTATACCAATACAAAAACAGTTATCAAGACCAGTTTTCGTATGACCTATAGC  
GATGTCAATGATATCCTAGCTGGCGATGAAGAAAAGAGAAAAGAAATATCAATAAAATTGTATCAAGTATCGAACTCATGGCC  
AAGCTTCATGAACTTTAGAAAAACATGCGTGTGAAACGTGGAGCTCTCAATTTTGTATACCAATGAAGCGAAGATTTTGTG  
ATAAACAAGGTAAGCCTGTTGATATCGTTCTTCGGCAGCGTGGTATTGCGGAGCGGATGATTGAGTCTTTTATGTTGATGGCT  
AATGAAACAGTTGCCGAACATTTACGAAGTTGGATTGCTTTTATCTATCGAATTCACGAGGAGCCTAAGGCTGAAAAGG  
TTCAGAAAGTTATTGATTATGCTTCGAGTTTGGCTTGGCGATTTATGGAACCTGCCAGTGAGATTAGTCAGGAGGCCTTCAA  
GACATCATGCGTGTGTTGAGGGGAGAACCTTATGCAGATGTATTGTCCATGATGCTTCTTCGCTTATGCAGCAGGACTCGTTA  
TTCGGAGCACAATCACGGCCACTATGGACTAGCTGTGACTATTATCTCACTTTACCAAGTCCAATTCGTCGTTATCCAGACC  
TTCTTGTTCACCGTATGATTCGGGATTACGGCCGTTCTAAGGAAATAGCAGAGCATTTTGAACAAGTGATTCCAGAGATTGCG  
ACCCAGTCTTCCAACCGTGAAACGTCGTGCCATAGAAGCTGAGCGTGAAGTCCGAAGCCATGAAAAAGGCTGAGTATAGGAA  
GAATACGTGGTGAAGAGTATGATGCAGTTGTATCAAGTATGTCAAATTCGGTCTCTTTGTGCAAAATGCGCAACACAGTTGA  
AGGCTTGATTACATCACTAATCTGCCTGAATTTTATCAATTTCAATGAGCGTGATTGACTCTTCGTGGAGAAAAATCAGGTA  
TCATTTCCGAGTGGGTACGAGATCCGTATCCGTGTTGAAAGAGCGGATAAAATGACTGGAGAGATTGATTTTTCATTCGTA  
CCTAGTGAGTTTGTGATGATTGAAAAAGGCTTGAACAGTCTAGTCGT  
AGTGGCAGAGGGCGTGAATTCAAATCGTCTCGGATCAAGAAAGGAGCAAGAAAGTCAAGGACGCTCAAATGATAAGCGT  
AAGCATTCAAAAAAGACAAGAAGAAAAAGGAAAGAAACCTTTTACAAGGAAGTAGCTAAGAAAGGAGCCAAGCATGG  
CAAAGGGCGAGGGAAAGGTGCTGCGACAAAATAA

4137.2 (SEQ. ID. NO. 245)

ATGGGCACAACAGGATTTACAATAATTGACTTAATTAATCTTGATTGTTTATTTACTTGCGGTGTTGGTTGCAGGTATCTATTTCT  
TCTAAAAAAGAGATGAAAGGAAAAGAGTTCTTTAAAGGAGATGGTTTCGGTTCCTTGGTATGTTACTTCGGTATCCATTTTTCG

CACAATGCTCAGTCCGATTTCCTTCTTGGGACTCGCTGGTAGCTCTTATGCAGGTAGCTGGATTTTATGGTTTGTCTCAATTAGG  
GATGGTAGTAGCTATTCCACTGACAATTCGTTTTATCTTACCTATCTTTGCACGGATAGACATCGATACGGCATATGATTACTT  
GGATAAACGTTTTAAATCTAAAGCACITTCGTATTATTCAGCACTCTTGTATTATTTATCAATTGGGACGTATGCTATCAT  
TATGTACCTCCCATCAGCTGGTTTATCAGTATTGACAGGAATTGACATCAATATTTTGATTATTTTGATGGGTGATTGCAAT  
TGTTTATCTTATACCTGGTGGTCTAAAAATCCGTATTATGGACAGACTTTTATCAAGGTGTTGATTCTGATTAGTGGTGTCTGTTT  
AGCTTTATTTGTACTGATTGCTAATATTAAGGTGGCTTTGGTGCAGTAGCAGAAACATTAGCAAACGGGAAATTCCTTGCTG  
CAAATGAAAAAACTTTTCGATCCTAACTTGCTTTCAAACCTCCATCTTTTAAATTGTGATGGGTTTCAGGCTTTACAATCTTGCTT  
CCTATGCTTCATCTCAAGATTGGTTCAACGTTTTACTACAACACAAAAATTAAGAAACTTAATAAGATGTTGTTCAACAAC  
GGTGTGTTTGTCACTTGCAACTGCAACAGTCTTTTACTTGATTGGTACAGGCTTGTACGTATTCTATCAAGTACAAAATGCAGA  
TAGTGCAGCTAGCAATATCCCTCAAGACCAAACTTTTATGTACTTTATTGCATACCAGTTACCAGTAGGTATCACAGGTTTGA  
TCTTGGCAGCGATTATGCAGCATCTCAATCAACTATTTCAACAGGTTTGAACCTCTGTTGCAACTTCATGGACATTGGATATT  
CAAGATGTCATTTCTAAAAAATATGTCAGACAATCGTCGTACGAAAAATTCACAATTCTGATCTCTAGCAGTAGGTTTATCTC  
AATTGGTGTGTTCCATTGTCTAGGCTCACTCAGATATTAATCTGCATACGAATGGTTCATAGTTTCATGGGACTTGTACTTG  
GTCTACTTGGTGGTGTATTTATCTTGGATTGTTTCTAAAAAAGCAAATAAACAAGGTGCTTATGCAGCGCTGATTGTATCA  
ACCATCGTCATGGTATTTATTAATACTTCTCTCCCAACAGCTGTAGCTACTGGGCATATTCATTGATTTCATCTCTGTA  
TCAGTAGTTTCAGGTTTATGTTATCTGTTCTTACGAAATAAAGTATCTGCACCTAAATATACAACGATTCATGATATTAC  
AGAAATTAAGCGGATTCAAGTTGGGAAGTTCGTCACCTAA

4138.1 (SEQ. ID. NO. 246)

ATGAAATTTAGTAAAAAATATATAGCAGCTGGATCAGCTGTTATCGTATCCTTGAGTCTATGTGCCTATGCACTAAACCAGCA  
TCGTTTCGAGGAAAAATAAGGACAATAATCGTGTCTCTTATGTGGATGGCAGCCAGTCAAGTCAGAAAAAGTAAAACTTGACA  
CCAGACCAGGTAGCCAGAAAGAAAGGAATTCAGGCTGAGCAAAATTGCAATCAAAATTACAGATCAGGCTATGTAACGTCA  
CAGCGTGACCACTATCATTACTATAATGGGAAAGTTCTTTATGATGCCCTTTAGTGAAGAAGTCTGATGAAGGATCCAAA  
CTATCAACTTAAAGACGCTGATATTGTCAATGAAGTCAAGGGTGGTTATATCATCAAGGTGCGATGGAAAAATATTATGTCTAC  
GTGAAAGATGCAGCTATGCTGATAATGTTGCAACTAAAGATGAATCAATCGTCAAAAAACAAGAATGTCAAAAGATAAT  
CAGAAGGTTAAGCTTAATGTTGCTGTAGCAAGGTCTCAGGACGATATACGACAAATGATGGTTATGTTCTTTAAATCCAGCT  
ATATTATCGAAGATACGGGTAATGCTTATATCGTTCCTCATGGAGGTCACTATCACTACATTCCCAAAAGCGATTTATCTGCT  
AGTGAATTAGCAGCAGCTAAAGCACATCTGGCTGGAAAAAATATGCAACCGAGTCAAGTAAAGCTATTTCTTCAACAGCTAGTG  
ACAATAACACGCAATCTGTAGCAAAAGGATCAACTAGCAAGCCAGCAAAATCTGAAAACTCCAGAGTCTTTTGAAGG  
AACTATGATTACCTTACCTAGCGCCCAACGTTACAGTCAAGTACGCTGGTCTTTGACCTGCTAAAGATTCATGCTGATCA  
CCAAATGGAGTTGCGATTCCGCATGGCGACCATTAACACTTTATTCCTTACAGCAAGCTTTCTGCCTTAGAAGAAAAGATTGC  
CAGAATGGTGCCTATCAGTGGGAAGTGGTCTACAGTTTCTACAAATGCAAAACCTAATGAAGTAGTGTCTAGTCTAGGCAGT  
CTTTCAAGCAATCCTTCTTTCTTAAACGACAAGTAAGGAGCTCTCTCAGCATCTGATGGTTATATTTTAAATCCAAAAGATAT  
GTTGAAAGAAACGGCTACAGCTTATATTGTAAGACATGGTGATCATTTCCATTACATTCCAAAATCAAAATCAAAATGGGCAAC  
CGACTCTTCAAAACAATAGTCTAGCAACACCTTCTCCATCTCTTCAATCAATCCAGGAAGTTCACATGAGAAACATGAAGA  
AGATGGATACGGATTGATGCTAATCGTATTATCGCTGAAGTGAATCAGGTTTTGTCTAGTACGGAGACCACAATCAT  
TATTTCTTCAAGAAGGACTTGACAGAAGAGCAAAATTAAGGTGCGCAAAAACATTAG

4139.1 (SEQ. ID. NO. 247)

ATGAAAAAAGAGCAATAGTGGCAGTCATTGTACTGCTTTTATTGGGCTGGATCAGTTGGTCAAAATCCTATATCGTCCAGC  
AGATTCCACTGGGTGAAGTGGCTCCTGGATCCCAATTTCTGTAGCTTGACCTACCTGCAAAATCGAGGTGCGACCTTTTCT  
ATCTTACAAGATCAGCAGCTGTTATTCGCTGTCATTACTCTGGTTGTCGTGATAGGTGCCATTTGGTATTTACATAAACACAT  
GGAGGACTCATTCTGGATGGTCTTGGGTTTGAAGTCTTAATATCGCGGGTGGTCTTGGAACTTTATTGACAGGGTCAAGTCAAG  
GCTTTGTTGGATGATGTTCCACCTTGACTTTTCAACTTTGCAATTTTCAATGTGGCAGATAGCTATCTGACGGTTGGAGTG  
TTATTTTATTGATTGCAATGCTAAAAGAGGAAATAAATGGAAATTA

4139.5 (SEQ. ID. NO. 248)

ATGAATACAAATCTTGCAAGTTTTATCGTTGGACTGATCATCGATGAAAACGACCGTTTTTACTTTGTGCAAAAGGATGGTCA  
AACCTATGCTCTTGCTAAGGAAGAAGGCCAACATACAGTAGGGGATACGGTCAAAGGTTTTGCATACACGGATATGAAGCA  
AAAAGTCCCGCTGCAACCTTAGAAGTGACTGCCACTCAGGACCAATTTGGTTGGGGACGTGTACAGAGGTTTCGTAAGGAC  
TTGGGTGCTTTTGGATACAGGCTTCTGACAAGGAATCGTTGTCTACTCGATATTCTCCTGAGCTCAAGGAACCTG  
GCCTAAGAAGGGCGACCAACTCTACATCCGTCTTGAAGTGGATAAGAAAGACCGTATCTGGGGCCTCTTGGCTTATCAAGAA  
GACTTCCAACGTTCTGCTCGTCCGTACAACAACATGCAGAACCAAACTGGCCAGCCATTGTTTACCGTCTCAAGCTGTC  
AGGAACCTTTGTTTACCTACCAGAAAATAATATGCTTGGTTTTATTCATCTAGCGAGCGTTACGCAGAGCCAGCTTTGGGGC  
AAGTATTAGATGCGCGGTTATTGGTTTCCGTGAAGTGGACCGCACTCTGAACCTCTCCCTCAAACCCAGCTCCTTTGAAATG  
TTGAAAAACGATGCTCAGATGATTTTGACTTATTGGAAGCAATGGCGGTTTCATGACCTTAAATGACAAGTCATCTCCAGA  
CGACATCAAGGCAACCTTTGGCATTCTAAAGGTCAAGTCAAGAAAGCTTTAGGTGGTCTTATGAAGGCTGGTAAAAATCAAG  
CAGGACCAGTTTGGGACAGAGTTGATTAG

4139.8 (SEQ. ID. NO. 249)

ATGAAAGATGTTAGTCTATTTTATTGAAAAAAGTTTTCAAAAGCCGCTTAAACTGGATTGTCTTAGCTTTATTTGTATCTGTA  
CTCGGTGTTACCTTTTATTTAAATAGTCAGACTGCAAACTCACACAGCTTGGAGAGCAGGTTGGAAAGTCGATTGACGCCA  
ACGAGAGGGCTATCAATGAAAATGAAGAGAACTCTCCAAATGTCTGATACCAGCTCGGAGGAATACCAGTTTGCTAAAA  
ATAATTAGACGTGCAAAAAATCTTTTACGCGGAAGACAGAAATTTGACTTTTATTTAAAGAGGGCGCTGGAAAGAAAG  
CCTACTATTGTCAGTGGCAAGATGAAGAGAAGAAATTGAAATTTGATCAAAATGACCCGACTGCTGAAGGTTTAAAT  
GGGGGTTGACCGCAACGGAAGATTTACCAAGCCCTGTATCCCTTGAACATAAAAGCACATACTTTGGAGTTTCCGACCCAC  
GGGATTGATCAGATTGTCTGGATTTTAGAGGTTATCATCCCAAGTTTGTGTTGGTTGCTATTATTTTATGCTAACACAATA  
TTTGCAAGAAAGATACAAAATCATCTGGACACAGCTCACTTATCTCTGTTTCAAAAGTGACATTGCAATATCCTCTCTTGG  
AGTTGGAGTGGGATATGTAAGTGTGCTGTTTATCGGAATCTGTGGCTTTCTTTCTAGTGGGAAGTCTGAAGGTTGTTTGG  
GACAGTTAGATTATCCCTACCAATTTATAGCTTAGTGAATCAAGAAAGTAACTATTGGGAAAAATACAAGATGTATTATTCCT  
GGCTTGCTCTTACGTTTCTTAGCCTTTATCGTCAATGTGGAAGTTGTGTACTTGATTGCTTACTTTTCAAGCAAAAAATGCCT  
GTCCTCTTTCTTCACTTATGGGATTGTTGGCTTATTGTTTGGTATCCAAACCAATTCAGCCTCTTCAAGGATTCACATCTG  
ATTCCCTTTACTTACTGCGTTCAAGTGGAGATTTTATCTGGAAGATTACCTAAGCAGATTGATAATGTGATCTAAATTTGGAG  
CATGGGAATGGTCTTACTTCTTGCCTGATTATCTTTTGGTATTGGGAATCTATTATTGAAAGATGGGGAAGTTCACAGA  
AAAAAGAATTTTTTAAATAGATTCTAG

4141.1 (SEQ. ID. NO. 250)

ATGATGAAGTTCATATTGGATATTGTTAGTACACCAGCTATTTTAGTAGCTTTAATTGCAATCTTAGGATTAGTTCCTCAGAA  
 GAAGAAATACCTGATATTATTAAGGTGGAATTAAGACCTTTGTTGGTTCTTAGTTGTATCTGGTGGTGCAGGAATTGTAC  
 AAAATCTTTTAAATCCATTTGGTACCATGTTTGAGCATGCTTTTCATTTATCTGGCGTTGTGCCGAATAATGAAGCAATTGTAG  
 CTGTAGCTTTAAACAATATGGCTCAGCTACTGCAATGATTATGTTTGCAGGCATGGTGTCAATATCTTAATCGCTCGTTTA  
 CTCGATTTAAATATATTTTAAACAGGGCACCACACTCTATATATGGCATGTATGATTGCGGTCAATTTATCAGTTGCTGGCT  
 TTAGTACTGCTTGCCTCTCATCTTACTAGGAGGATTAGCACTCGGTATTATTATGAGTATTTCCCCAGCATTTGTGCAAAAATATA  
 TGGTTCAATTAACCTGGAAATGACAAGGTAGCTTTAGGTCAATTTAGGTCTTTGGGATATTGGTTGAGTGGTTTACTGGTAGC  
 CTTATCGGTGACAAATCAAAATCAACAGAGGACATTAAATTTCCAAAGAGTTTAGCTTTTTACGTGATAGTACTGTTAGTAT  
 TACTTTATCCATGGCAGTTATTTACATTATTGTAGCTATCTTTGCAGGGTCAGAATATATAGAAAAAGAAATCAGTAGTGGTA  
 CAAGTGGTCTAGTTTATGCTTTACAATTAGCAGGTCAATTTGCAGCAGGGTATTGTTTATTTAGCAGGTGTTCCGCTTATTT  
 TGGGCGAAATTTGCCAGCCTTTAAAGGTATTTAGAGCGCTTGTACCTAATTTCAAACCTGCTTTGGATTGTCCGATTGTTT  
 ATACTTATGCACCAATGCAGTTCTAATTGGATTATCTCTAGTTTGTGGTGGTTTAGTAAGTATGGTAATTATGATTGCTT  
 CAGGAACGGTGTATCTTACCAGGTGTTGTGCCTCATTTCTCTGTGGAGCGACTGCAGGTGTCAATGGGAATGCATCTGGT  
 GGTTCTCGTGGAGCCATATTGGAGCATTTTACAAGGTATTTAAACAGTTTCTTCCAGTCTTTAAATGCCAGTTTGGGA  
 GGACTTGGTTTCCAAGGATCAACTTTCTCAGATGCAGATTTTGGTCTATCAGGAATTATTTAGGAATGTTAAATCAATTTGG  
 CTCACAAGCAGGCATTGTGATTGGTCTTGTCTTATCTAGCAGTTATGTTTGGAGTATCCTTTATTAAGCCATCTGCAAC  
 GGAGGAATAA

4142.3 (SEQ. ID. NO. 251)

ATGATTAACAAATTTCTCTCTGCCCTTTCCGGTCAATTTCTTTCTATCCCTATCATAACTTATTCTTTTTTCCCCTCTTCTAATCT  
 TAACATTTGGCTATCTACCCAACTATCTTGGCACAGATTTATGCCTTCCCCTTAGCTACTGCAACTATGGCTGCTATTTAAG  
 TTTCTTATTTTTTCTATCTTTTACAAGAAAAATAACAAATACGGTTTACTCTGGCATTTTGTCTTACTATCGCTCATA  
 TTACTATTATTCGGAACAGATAAAACCTTTCTTCTGCATCAAAATAGACTAAAACCTTAAATTAGTAACCTGGAACTGCGC  
 TAATCAAAATAGAAGCACAAATATTGAGCGAATTTTAGCCATTTTACGCCGATATGGCTATATCCCTGAACCTAGCTACCA  
 ATATCAGAGGTGAGCAAGAAAAACAGAGAATCAAACTATTTTTCATCAAGTTGGACTTTCTATGGCCAATGATATTTTC  
 ACTTCTCCACCTACCAATAGTGGAAATAGCTCCTGTGACTGTGATTGTCAAGAAAGTTATGGTTTCTATACAGAAGCTAAAC  
 TTTTCATACAACACGGTTTCGGGACAATTGTATTACATTCGAGAAAAACAAATATACCAGATATCATTGCCTTGCATCTGCGC  
 CTCCTCTCGCAGGTTTAATGGAATCTGGAAGCAAGACTTAAACATCATTCAATCAATTTGGCTTCAAAATATCCAAAGGT  
 ATTATTGCAGGTGATTTTAATGCAACTATGCGTCATGGAGCACTTGCAAAAATAGCTCTCATAGGGACGCATTAATGCAC  
 TGCCACCTTTTGAAGAGGAACCTTGAATAGCCAAAGTCCAAACCTTTTAAATGCAACAATAGATCATATTTTATTGCCTAAA  
 AACCACTACTATGTTAAAGATTTAGACATTGTAAGTTTCAAACTCTGATCATAGATGTATTTTACAGAAATCACATTTTA  
 A

4142.4 (SEQ. ID. NO. 252)

ATGAATCCAATCCAAGATCTTGGGCTTATGTCAGCAGAAAGCGACTGAGAAGTTTTATTTTATTTCTGATTTTATTGGTCTT  
 ATTGGCCGGAATTTACGCTGTTTACTCTGATGAAGTCCAACAAAACAGTAGAAAGCAATCTTTATAAATCACTCAATACA  
 TCTTTTTCTATTAAGAAGATAGAGAATGGTCAGACATTCAAGTTGTGAGACCTAGCATCTGTAAGCAAGATTAAGGGGCTGG  
 AAAATGTCTCTCTGAACTTGAGACGGTCGCAAACTAAAAGACAAGGAAGCAGTACTGGCGAGCAGAGCGTGGAGCGTG  
 ATGATTTATCAGCTGCAGACAATAACTTGGTTAGCTTAAACGGCTCTTGAGGATTTCATCCAAGGATGTAACCTTTACCAGTTG  
 GCTTTCAATCTAAAAGAAGGGCGACACCTTCAAAAAGGGGATTCCAAGAAATCCTTATCCACGAAGAAATTGGCTAAGAAG  
 AACGGTCTTTCGCTTACAGACAAGATTGGCTTGGATGCTGGTCACTGTAATCTGGAAGGACAAACAGTAGAGTTTGAGA  
 TTTATCGGCATCTTCTCTGTTGAAAAACAAGAGAAATGACAGGCTTGTCTTCTGACTGAGAAATCAAGCTTTTACAGAC  
 TATGAAAGTAGCCAAACCTTTTGGGCAATAGTGAAGCTCAAGTCACTGAGCAGCAGCTTCTATGTAGAAAATCCTAAGGAAA  
 TGGACGGACTCATGAAGCAGGTAGAAAACCTTGGCCTTGGAAAAATCAAGGCTACCAAGTTCGAAAAGGAAAACAAGGCTTTG  
 AACAAATCAAAGACTCAGTTGCAACTTTCCAAACCTTCTGACCATCTTCTTTATGGGATGTTGATAGCAGGAGCTGGAGCC  
 TTAATCTGGTTTGTCTCTCTGTTGAGAGAACGGGTCTATGAAGTGGGGATTTTACTTGCACTTGGAAAAGGCAAGAGCTC  
 GATCTTCTACAATTCTGTTAGAGGTAGTTTGGTATCTCTTGGAGCTTGTCTCCAGCATTTGTGTCAGGAAACGCAATCAC  
 AACTTACCTACTCCAACTCTACTAGCAAGTGGAGATCAGGCAAGCTTACAAGATACACTAGCCAAAGCAAGCAGTTTATCA  
 ACTAGCATCTTATCTTTTGCAGAACTCTATGTTTCTAGTTCTGCTTATCTGTAGCCCTTGTTCCTATTTCTTATT  
 TAGAAAAACCCGAAAGAAATTTATCATCTATTAGTTAA

4142.5 (SEQ. ID. NO. 253)

ATGTTACACAACGCATTTGCCTATGTTACAAGGAAGTTTTTCAAATCGATTGTCATCTTCTGATTATTTCTCTCATGGCGAGC  
 TTGAGTTTGGTTCGGCTTGTCAATCAAGGGAGCTACTGCCAAGGCTTCTCAGGAGACCTTTAAAAATATACCAATAGCTTCTC  
 CATGCAAAATCAATCGTCGCTCAACCAAGGAACGGCTCGTGGTGTGGGAATATCAAGGGTGAAGACATCAAAAAATCAC  
 CGAAAAACAGGCATTGAGTCTTATGTCAAACGTATCAACGCTATCGGAGATTTGACTGGATATGACCTGATTGAAACGCCA  
 GAAACCAAGAAGAAATCTCACTGCTGATCGTGCCAAGCGTTTGGAAAGTAGCTTGATGATTACAGGTGTCAATGACTCCTCTA  
 AAGAAGACAAGTTGTCTCTGGTTCTTATAAACTAGTCGAAGGAGAGCACTTAACCAACGACGACAAGGATAAAATCCTCTT  
 GCACAAGGACTTGGCAGCCAAACACGGCTGGAAGTAGGGGACAAGGTAAACTGGACTTAATATCTACGATGCAGATAA  
 TGAAGAAAGGAGCCAAAGGAACAGTTGAAGTGACAATCAAGGGACTCTTTGATGGTCAATAAAGTCAGCAGTAACCTACTC  
 ACAAGAACTTTACGAAAACACAGCTATTACAGACATTCACTGCTGCAAACTTTATGGATACACAGAAGACACAGCCATT  
 TATGGGAGCGCAACCTCTTTGTAACAGCAGACAAGAACTTGGATGATGTTATGAAAGAGTTGAATGGCATCAGTGGTATCA  
 ACTGGAAGCTACACACTCGTCAAGAGCTCTCAAGCTTCACTACCCAGCTTTGAGCAATCTATCTCTGTTATGTAAGAAGTGGC  
 AACCTCTCTTCTGGGGTAGCTTGAGCTTCTCAGTTCTCTCTTGCCTCTTGTCTCAGCCTTTGGATCAACGCCCGTCGCAAG  
 GAAGTGGGAATTTCTCTCTCTATCGGCCTCAAGCAGGCAAGTATCTTGGGTCA  
 ATTATCATACCGAATCTATCTTGATTGCTATCCCTGCTAGTTTCTGCTTACTTCTCTAGCTAATTACACTGCCCCGTGCAATTGG  
 AAACACTGTCTTGGCAATGTGACTTCAAGTGTGCAAAACAGGCTAGTAAGGCGGCTCAAGCCTTAACCTTGGTGGTGGT  
 GCAGAAGTAGATGGCTTTAGCAAGACCTTGTGAGCCTAGACATTTCCATTACAGATCAGACTTTATCATCATTTTGTCTCT  
 TGCCTTGGTTCTAGTGGTTCTCGTTATGGCGCTTGTCTCAAGCAATCTCTTAGAAAAACAACCAAAAGAGCTTGTCTGGATG  
 GTGAATAA

4144.1 (SEQ. ID. NO. 254)



ATGTCACAGGATAAACAAATGAAAGCTGTTTCTCCCTTCTGCAGCGAGTTATCAATATCTCATCGATTGTCGGTGGGGTTGG  
GAGTTTGATTTTCTGTATTTGGGCTTATCAGGCTGGGATTTTACAATCCAAGGAAACCTCTCTGCCTTTATCCAGCAGGCAG  
GCATCTGGGGTCCACCTCTCTTTATCTTTTACAGATTTTACAGACTGTCGTCCCTATCATTCCAGGGGCTTGACCTCGGTGG  
CTGGGGTCTTTATCTACGGGCACATCATCGGGACTATCTACAATATATCGGCATCGTGATTGGCTGTGCCATTATCTTTTATC  
TAGTGGCCTATACGGAGCTGCCTTTGTCCAGTCTGTGCTCAGCAAGCGCACCTACGACAAGTACATCGACTGGCTAGATAA  
GGGCAATCGTTTGGACCGCTTCTTTATTTTATGATGATTTGGCCATTAGCCCAGCTGACTTTCTCTGTATGCTGGCTGCCCT  
GACCAAGATGAGCTTCAAGCGCTACATGACCATCATCATTCTGACCAAAACCTTTACCCTCGTGGTTTATACCTACGGTCTGA  
CCTATATTATTGACTTTTTCTGGCAAATGCTTTGA

4144.2 (SEQ. ID. NO. 255)

ATGAGAAATATGTGGGTGTAATCAAGGAAACCTATCTTCGACATGTCGAGTCATGGAGTTTCTTCTTTATGGTGATTTCCGC  
GTTCCCTCTTTTGAATCTCTGTAGGAATTGGGCATCTCCAAGGTTCTTCTATGGCTAAAAATAATAAAGTGCCAGTAGTGA  
CAACAGTGCCATCTGTAGCAGAAGGACTGAAGAATGTAATGGTGTTAACTTCGACTATAAAGACGAAGCAAGTGCCAAAG  
AAGCAATTAAAGAAGAAAAATTAAGGTTATTTGACCATTTGATCAAGAAGATAGTGTCTAAAGGCAGTTTATCATGGCGA  
AACATCGCTTGAAATGGAATTAATTTGAGGTTACAGGTACACTCAATGAAGTCAAAAATCAGCTTAATCGTTCAACTGCT  
TCCTTGTCTCAAGAGCAGGAAAAACGCTTAGCGCAGACAATTAATTCAAGAAAAAGATTGATGAAGCCAAAGGAAAAATAA  
AAGTTTATTCAAACAATTGCAGCAGGTGCCTTAGGATTCTTTCTTTATATGATTCTGATTACCTATGCGGGTGTAACAGCTCA  
GGAAGTTGCCAGTGAAAAAGGCACCAAAATTAAGGAAGTCGTTTTCTAGCATAAGGGCAAGTCACTATTTCTATGCGCGG  
ATGATGGCTCTGTTCTAGTGATTTAACGCATATTTGGATCTATGTTGTAGGTGGTCTGGCTGCCGTTTGGCTTTAAAGAT  
TTGCCATTCTGGCTTGGTATTTTGGATCACTTTGGGAGATGCTATCTCACTGAATACCTTGCTCTTTATTTTATGATCAGT  
CTTTTCATGTACGTAGTCTTGGCAGCCTTCCTAGGATCTATGTTTCTCGTCTGAGGACTCAGGGAAGGCCTTGTCGCCTTTG  
ATGATTTTGATTATGGGTGGTTTTTTTGGAGTGACAGCTCTAGGTGCAGCTGGTGACAATCTCCTCTTGAAGATTGGTCTTAT  
ATTCCCTTTTATTTTCGACCTTCTTTATGCGGTTTCGGAACGATTAATGACTATGCGGGGGAGCAGAAGCATGGATTTCATTGC  
TATTACAGTGATTTTGGCGGTGGTAGCAACAGGATTTATCGGACGCATGTATGCTAGTCTCGTCTTCAAACGGATGATTTAG  
GGATTTGAAAAACCTTTAAACGTGCCTTATCTTATAAATAG

4144.3 (SEQ. ID. NO. 256)

ATGACAGAAACCATTAATTTGATGAAGGCTCATACTTCAGTGCGCAGGTTTAAAGAGCAAGAAATCCCCAAGTAGACTTAA  
ATGAGATTTTGACAGCAGCCAGATGGCATCATCTTGAAGAATTTCCAATCCTACTCTGTGATTGTGGTACGAAGTCAAGA  
GAAGAAAGATGCCTTGTATGAATTTGGTACCTCAAGAAGCCATTGCGCAGTCTGCTGTTTCTCTCTTTGTCGGAGATTGA  
ACCGAGCAGAAAAAGGGAGCCCGACTTCATACCGACACCTTCCAACCCCAAGGTGTGGAAGGTCTCTTGATTAGTTCGGTCA  
TGACAGCTCTTGCTGGACAAAAACGCCTTGTGGCAGCTGAAAGCTTGGGCTATGGTGGTGTGATTATCGGTTTGGTTCGATACA  
AGTCTGAAGAAGTGGCAGAGCTCTTAACTACCTGACTACCTATTTCTGCTTTGGGATGGCACTGGGTGTGCCAAATCAA  
CATCATGATATGAACCGAGACTGCCACTAGAGAATGTTGCTTTGAGGAAGAATACCAAGAACAGTCAAGTCAAGGAAATCC  
AAGCTTATGACCGTGTTCAGGCTGACTATGCTGGGGCGCGTGCACCAAGCTGGAGTCAGCGCTAGCAGAACAGTTTGG  
TCAAGCTGAACCAAGCTCACTAGAAAAAATCTTGAACAGAAGAAATTATTGTAG

4146.1 (SEQ. ID. NO. 257)

ATGTTAAAACTTATTGCTATTGTTGGAACAAATTCAAAACGTTCTACAAACCGTCAATTGCTTCAATACATGCAAAAACACTT  
TACTGACAAAGCTGAAATTGAACTTGTGAAATCAAGGCCATCTCTTCAACAAACAGCTGACAAGCAAGTACCTGCT  
GAAATATTGGAAATTTGCTGCTAAAAATCGAAGAGGCAGATGGCGTTATTATCGGTACTCCTGAGTATGACTACTTATTCCAG  
CTGTTTGTATGAGCGCTCTTGCTTGGTTGTCTTATGGTATTTACCCACTTTTGAACAAACCAATCATGATTACAGGTGCTTCTT  
ACGGTACCGCTTGGTTCATCTCGTGCCCAATTGCAACTTCGTCAAACTTTGAATGCTCCTGAAATCAAGGCAAAATGTTCTTCCA  
AGTAATTTCTTGCTCTCACACTCTTCAAGCATTAAACCAAGTGGCGACTTGGTTGACCTTGATTTCAAGAAATTGGA  
TGCCATCTTTGATGACTTCCGTATCTTTGTAATAATCACAGAAAAATTACGTAATGCACAAGAATTACTTCGCAAGATGCTG  
AAGACTTTGACTGGGAAAAATTTGTAA

4146.2 (SEQ. ID. NO. 258)

ATGAATACCTATCAATTAAATAATGGAGTAGAAATCCAGTATTGGGATTTGGAACCTTTAAGGCTAAGGATGGAGAAGAAG  
CCTATCGTGCAGTGTAGAAAGCCTTGAAGGCTGGTTATCGTCATATTGATACGGCGCGGATTTATCAGAATGAAGAAAGTGT  
TGGTCAAGCAATCAAGATAGCGGAGTTCCACGTGAAGAAATGTTTCGTAACCTACCAAGCTTTGGAATAGTCAGCAAAACCTAT  
GAGCAAACTCGTCAAGCTTTGGAATAATCTATAGAAAACTGGGCTTGGATTATTTGGATTGTATTTGATTCAATTGGCCGAA  
CCCCAAACCGCTCAGAGAAAAATGACGCATGGAAAACTCGCAATGCGGAAGTTTGGAGAGCGATGGAAGACCTCTATCAAGA  
AGGGAATAATCCGTGCTATCGGCGTTAGCAATTTTCTTCCCATCATTTGGATGCTTGTGTTGAACTGCAACTATCGTTCCTG  
CGGTCAATCAAGTTTCGTTTGGCGCCAGGTGTGTATCAAGATCAAGTCGTAGCTTACTGTGCGTGAAAAGGGAATTTTATTGGA  
AGCTTGGGGGCTTTTGGACAAGGAGAAGTGTGATAGCAAGCAAGTCCAAGAAATAGCAGCAAAATCACGAAAAATCGGT  
TGCTCAGATAGCCTTGGCCTGGAGCTTGGCAGAAGGATTTTACCACCTTCCAAAACTGTGCACAACCTCTCGTATTCAGCTA  
ATCTTGATTGCTTTGGAATTGAAGTCAATGAGGAGAGAGAAACCTTAAAAACGATTGCTGTTCAATCGGGTGCTCCACG  
AGTTGATGATGTGGATTCTAG

4147.1 (SEQ. ID. NO. 259)

ATGAGGTGCAAAAATGCTTGATCCAATTGCTATTCAACTAGGACCCCTAGCCATTGCTTGGTATGCCTTATGTATTGTGACAGG  
CTTGATTCTTGGGTTTATTTGACCATGAAAGAAGCACCTAGAAAGAAGATCATACCAGACGATATTTAGATTTTATCTTAG  
TAGCCTTTCCCTTGGCTATTTTAGGAGCTCGTCTCTACTATGTTATTTCCGATTTGATTACTATAGTCAGAAATTTAGGAGAGA  
TTTTTGCCATTGGAATGGTGGTTTGGCCATTTACGGTGGTTGATAACTGGGCTCTTGTGCTCATATCTTTGGTAGCCGTA  
AACTCATCAATACTTGGGATTTTCTAGATATTGCGGCGCCTAGCGTTATGATTGCTCAAAGTTTGGGGCGTTGGGGTAATTTT  
TTTAAACGAAGAAGCTTATGGTGCAACAGTGGATAAATCTGGATTATCTACCTGGCTTATCCGTGACCAGATGTATATTGAGGG  
GAGCTACCGTCAACCGACTTTCTTTATGAGTCTCTATGGAATCTGCTTGGCTTTGCCTTGATTCTGATTTTATAGCGGAAATG  
GAAGAGTCTCAGACGAGGTGATATCACGGCCTTTTACTTGATTGTTGGTATGGTTTCGGTCTGATGGTTTCAAGGATGCGGAA  
CAGATAGTCTCATGTTCTTGGCTTTTCGAGTGTCCCAATGGCTGTCAAGTTGCTTATCGGTCTCGGTATAATGATCGTTATTT  
ATCAAAATCGAAAGAAGGCCCTTACTATATTACAGAGGAGGAAAACTAA

4147.2 (SEQ. ID. NO. 260)

ATGGGTAAATTATCTCAATCCTTTTAGGAACCGTTTCAGGTGCAGCTCTTGCTTGTTTTAAACAAGTGATAAGGGCAACA  
AGTTTGACAGTCAGGCTCAAGATTTTCTAGATGATTTGAGAGAAGATCCGGAGTATGCCAAGGAGCAAGTCTGTGAAAACTG



ACAGAAGTTAAGGAGCAGGCTACAGATTTTGTCTGAAAAACAAAGAAGAGTTGAGTCAGGTGAAATCACTGTGGACAGT  
ATACTTGCTCAAACCTAAATCCTATGCTTTTCAAGCGACAGAAGCATCAAAAAATCAATTAATAATCTCAAGGAGCAATGGC  
AAGAAAAAGCCGAAGCTCTTGATGACTCAGAAGAGATTGTGATTGATATAACAGAAGAATAA

4147.3 (SEQ. ID. NO. 261)

ATGAAAACTAAATTGATCTTTTGGGGCTCTATGCTCTTTCTCCTCTCCCTCTCCATCCTTCTGACCATTTATCTGGCTTGGATT  
TCTATCCTATGGAGATTCAAGTGGCTAAACTTAACGAATCGAGTCTATCTAAAAACAGAAACCATTCATACAATTTTCATATC  
TTGATGAATTAATCTGACCAATCCTTTTAGTCAGGTCTACAGATGCCTGATTTTCGTTCTGTCAGCAGCTGGTCTGACCATTTT  
GCAGTGGTCAAGAATCTCTTTCAITTTGGTTAGCTAGTAGCTCTAGTGACACTGCCAAGTTTCTATGTCTTTGTCAATAGGATT  
GTGAAAAAGGACTTTTTGTCTCTTTATCGAAAAAGTCTCCTGGCTCTAGTAGCTTACCTGTGATGATTGGACTTGGGGGAGT  
TTTGATTGGTTTTGACCAATCTTTACTCTTTTCCATCAAAATCTCTTTGTGGGAGATGATACCTGGCTTTTTGATCCAGCCAA  
GGATCCTGTTATTATGATTTTCCAGAGACCTTCTTCTCATGCCTTCCCTCTTTTTTGGCCTCTATGAAAACTTCTTTGGC  
TATCTGTATCTGAAAAATCGTAGGAAGTGA

4149.1 (SEQ. ID. NO. 262)

ATGACTTATCATTTTACTGAAGAATACGATATTATTGTAATTGGTGGGGACACGCTGGGGTTGAGGCTTCTTGGCCGCTAG  
CCGTATGGGCTGTAAAGTCTGCTTGGCACCATCAATATTGAAATGCTGGCTTTCATGCCTTGTAAATCCCTCTATCGGTGGTTC  
TGCCAAGGGGATTGTCGTGCGTGAAAGTCGATGCCCTCGGTGGCGAGATGGCCAAAACCATTGACAAGACTTACATCCAGATG  
AAGATGCTAAACACAGGGAAGGGGCCAGCTGTCCGTGCCCTTCGTGCGCAGGCTGACAAGGAACCTTACTCTAAGGAGATG  
CGCAAGACGTTGAAAACCAAGAAAACTGACCCTTCGTCAAACCATGATTGATGAGATTTTGGTGGAAAGATGGCAAGGTTG  
TCGGTGTGCGTACAGCCACCCATCAAGAATATGCTGCTAAGGCTGTTATTGTGACGACAGGACTGCTCTCCGTGGGGAAAT  
TATCATCGGAGACCTCAAGTACTCATCAGGTCTAACCACAGCTTGGCTTCTATTAACCTAGCTGACAATCTCAAGGAATCG  
GTCTCGAAATCGGTGCTTTCAAGACAGGAACCCCTCCACGTGTCAAAGGCTTCTCTATCAATTACGATGTGACAGAAATTCAG  
CCAGGAGACGAAGTGCCTAATCATTTCTCATACACTTCACGTGATGAGGATTATGTCAAGGACCAAGTACCATGCTGGTTGA  
CCTATACCAATGGTACCAGTCATGAGATTATCCAAAACAACCTCCACCGTGGCCTATGTTTACAGGTGTGGTCAAGGGAGT  
GGGGCCTCGTTACTGTCCGTGATTGAAGACAAGATTGTGCGCTTTCGGGACAAGGAACGTACCAACTCTTCCTTGAGCCA  
GAAGGGCGCAATAGTCTATGTGCAAGGACTTTCAACAGTCTGCCTGAGGATGTCCAGCGTGACTTGGTGCATT  
CCATCAAAGGTTTGGAAAAATGCAGAGATGATGCGGACAGGTTATGCTATTGA  
GTATGATATGGTCTTGCTCATCAGTTGCGTGCGACTTTGGAAAAACCAAGAAAAATCTCAGGTCTCTTCACTGCTGGTCAGACAA  
ATGGAACATCAGGTTACGAAGAGGCAAGCAAGGCAAGGATTATCGCGGCTGTAATGCGGCTCTGAAAAATCCAAGGCAAGC  
CTGAATTGATTTTGAAGCGCAGTGATGGTTATATCGGGGTGATGATCGACGACTTGGTGACCAAGGGAACCATGAAACCTA  
CCGTCTCTTGACCAAGTCTGCTGAATACCGTCTCATTTCTGTCATGACAATGCTGATATGCGCTTGACTGAGATGGGACCGG  
AGATTGGCCTTGTGGACGATGAACGCTGGGCTCGTTTGAATCAAGAAAAATCAATTTGATAATGAGATGAAGCGCCTAGA  
CAGTATCAAACTCAAGCCAGTCAAGGAAACCAATGCCAAGGTTGAGGAGATGGGCTTCAAACCTTGACCGATGCAGTGAC  
AGCCAAGGAATTCCTTCGCGCTCCAGAAGTTTCTTACCAAGATGTGGTGGCCTTCACTGGACAGCTGCAGAAGACTTGGAT  
GACAAGATTATCGAATTGATTGAAACAGAAATCAAGTATGAAGGCTATATTTCCAAAGCCATGGACCAAGTTGCCAAGATGA  
AACGCATGGGAAGAAAAACGCATTCCGGCCAATATCGACTGGGATGACATTGATTCTATCGCAACCGAAGCCGTCAGAAGTT  
CAAACCTCATCAATCCAGAAACCATCGGCCAAGCCAGCCGATTTTCGGGAGTAAACCCAGCAGATATTTCTATTTTGATGGT  
TATCTGGAAGGTAAAAATCGTAGTATTTCTAAAACTCTTCAAAAAATCAAAATGA

4149.2 (SEQ. ID. NO. 263)

ATGAAAGTATTAGCTTTTGATACGTCCAGCAAGGCTCTTTCTCTGGCTATTTTAGAGGATAAGCAGGTTCTTGGCGAGACGAC  
GATTAATATTAAGAAAAATCACAGTATTACTCTTATGCCTGCCATCGATTTTTTATGGCAAGTTTGGATTGGACACCCAAAGG  
ATTTGGACCGAATCGTGGTAGCTGAAGGGCCGGTAGCTATACAGGCTTGCGAATTGCGGTAGCAACTGCTAAGACCTTAGC  
TCACACCCTGAACATCGAGTTGGTTGGTATGTGAGTCTCTTGGCTCTGGTCCCCATCAACAAGAAGTTTGTGTTGTCCTT  
TGATGGATGCGCGTCGCAATAATGTTTATGCAAGGATTTTATGAAAAATGCCAAACCTGTATGGCAGAAAGCGCACCTATCTTT  
GAAGAGGTGCTAGAAAAAGTCAAGGGTACTAGTCAGGTAACCTTTGTGCGAGAAGTTGGCCCCCTTTGTTGAGCAGATTCAAA  
AACACTTGCCAAGGACTGATTACAAAGAAACATTTGCCAATGCAGCTAATCTAGCTCTTTTGGCCTGGGACAAGGAAGCAGA  
CTCCTTGCAATGTTTGTGCGCAATTACCTCAAACGAGTGGAGGCTGAGGAAAACTGGCTCAAGAACCATACCGAGTCTGGC  
GAGTCTTACATTAACGCCTATGA

4149.3 (SEQ. ID. NO. 264)

ATGATAGAAATCAAGCGAATTCACAACAGCCTGACCTAGCTCAAGCCATCTACGCTGTTATGGCAGCTGTTTACCTAGTCA  
GTCCTTGGACTCTGGAGCAAATCCAAGCAGATCTGCCAAGACCAGACTTGGTATGCATTGGCTTATGATGGGGCAGAAGT  
GATTGGATTTCTAGCTGTGCAGGAGAATCTTTTGAAGCAGAAGTCTGCAAAATCGCTGTCAAAGGAGCTTATCAGGGTCAG  
GGGATTGCGTCTCagCCTTGTGTTTGTCTCAATTGCGGACAGACAAGGAATTTTCTCGAAGTCAGACAGTCAAAATCAACGAGCGCA  
AGCATTTTACAAGAAAGAAAGATGACAGTTATCGCTGAGCGAAAGGCCTACTACCATGACCCAGTCGAGGACGCCATTATC  
ATGAAGAGAGAAATAGATGAAGGATAG

4152.2 (SEQ. ID. NO. 265)

ATGACAAAACAAGTCTTATTAGTGGATGATGAAGAACACATTCTGAAATTGCTTGACTACCATTAAAGTAAGGAAGGCTTTT  
CTACTCAATTGGTGACAAATGGACGGAAGGCCCTTAGCTTTGGCAGAAACAGAACCCCTTTGATTTTATCTTGCTTGATATCATG  
TTACCACAATTAGATGGAAGTTTGTAAAGCGCTGAGAGCCAAAGGCGTCAAACTCCAATTATGATGGTTTCTGCGA  
AAAGTGATGAATTTGATAAGGTTTGGCCTTGGAAATTAGGGGCTGATGACTACCTGACCAAGCCTTTTAGCCCTAGAGAATT  
GCTGGCGCTGTCAAGGCTGTCTCAGGCGAACTAAAGGAGAACAAAGAGGAGATGATTCAGATAATATCGCTGACGATTC  
TTGGCTATTTGGGACCTTGAAAGTATACCCTGAGCGTCATGAAGTCTACAAGGCGAATAAGTTACTGAGTTTGACCCCAAAA  
GAATTTGAAAGCGATAAAAAATCCGTTTTTTGAAAGTTTTCAAAGTTTCGAAAGTAACCGCCAATAA

4154.1 (SEQ. ID. NO. 266)

ATGACTACTTTTAAAGATGGATTTTTATGGGGTGGTGTGCTGTTGCTGCTCATCAACTTGAAGGTGGATGGCAAGAAGGTGGCA  
AGGGAATTAGTGTGCTGATGTTATGACTGCTGGTTCGTATGGAGTAGCTCGTGAAATTAATTTGGGAGTTTATAGAGGGTAA  
TATTATCCAAATCATGAGGCGATAGATTTTTATCACCCTTATAAAGAAGATATAGCACTTTTGTGTAATGGGATTCAAGTG  
CTTCCGTACCTCTATTGCATGGACACGTATCTTTCCAAAAGGTGATGAGTTAGAGCCGAATGAAGAAGGATTACAGTTTTATG

ATAATCTTTTGTGATGAATGCTTAAAGAATGGTATTGAACCTGTCATCACTCTATCTCATTTTGAATGCCTTATCACTTAGTGA  
CCGAATATGGTGGTTGGAAAAATAGGAAATGATTGATTTCTTTGCTCGTTTTGCAGAAGTCGATTAAACGTTACAAAGAT  
AAGGTTAAATATTGGATGACTTTCAATGAAATCAATAATCAAGCGAATTATCAGGAAGATTTTGCACCATTACTAACTCAG  
GTATTGTATATGAGGAAGGTGATAATAGAGAAGCAATTATGTATCAAGCAGCACATTACGAATTAGTTGCTTCTGCACGAGC  
TGTAAAAAATGGTCATGAGATTAAATCCAGATTTTCAAATAGGTTGTATGATTGCCGATGTGTCCAATTTATCCAGTTACTTGCA  
ATCCTAAGGATATCTTAATGGCAATGAAAGCTATGCAGAAGCGTTATTATTTGCTGATGTGCATGTTTTAGGTAAATATCCT  
GAGCATATTTTCAAGTATTGGGAACGAAAAGGTATTTAGTTGATTTTACTGCCAGGATAAAGAAGATTACTTGGTGGGA  
CTGTAGATTACATTGGTTTCAGTTACTATATGTCCTTTGCTATCGACTCTCATCGTGAAAAATAATCCTTATTTGATTATCTTG  
AAACAGAAGATTTAGTGAAAAATAATTATGTTAAGGCTTCTGAATGGGAGTGGCAAATTGATCCAGAAGGTTTGGCTTATGC  
GTTAAATTGGTTTACAGACCACTATCACTTACCCTCTTATTGTTGAAAAATGGTTTTGGAGCTATAGATCAAGTTGCAGCAG  
ATGGTATGGTACATGATGATTATAGAATTGAATATCTAGGTGCCATATTCGTGAAAATGAAAAAGGCTGTAGTTGAAGATGG  
TGTTGATTTAATGGGTTATACCTCATGGGGATGATTGATTTGGTTTCAGCTGGTACCGGTGAAAATGCCGAAACGTTATGGCT  
TTATTTATGTAGATAAAGATGATAATGGGAAGGGAAGTTATAATCGTTCCCGGAAAAATCTTTTGGCTGGTATAAGGAAGT  
TATTCATCTAACCGTGAATCAGTAGAATAG

4154.2 (SEQ. ID. NO. 267)

ATGGATCAACAAAACGGGTTGTTTGGTTTTCTTGAAAACCATGTTATGGGACCAATGGGCAAACCTTGCTCAGTTAAAGTAGT  
ACGTGCTATCACGGCTGCAGGTATGGCTGCTGATACCTTTACTATTGTAGGATCAATGTTTTGGTATTACGATTTTGCCACA  
AGCTTTCTCATTTTGGCCAATTGTGGCAGATATTTCTCTGTTCTTATGATAAATTCACATCACTTTACACGTTAAATGCTA  
TGGCACTATGGGTTCTATCTCTTTATTTCTGTTCTATCACTTGCATATGAATTGACAAAAATTTATGCAGAGGAAGAAGAAC  
TCAATATGAATCCTCTTAATGGTGCCTTGCTTGCCTTGATGGCTTTTGTCTATGACAGTACCGCAAATCATTTTGTATGGTGGAA  
TGATGAAGAGCTGTGACAAGTCTAAAAGAAGGTGCAGTAATTGCAGATGGATGGGCAATGGGAAAATGTAGTCGCACGTTT  
GGACAACAGGGAATTTTACCAGCAATCATTTAGGCAATTGTGACTGTTCTTATTATCGTATGTGTGTTAAACATTAATGGGT  
ATTAATAATGCCTGAAGCTGTTCCAGAAGGAGTTTCTCGTGGATTACCGCTTTGGTCCGGGATTTGTTGTTGCATTTGTTGTT  
ATCTTTATCAACGGCTTCTTGTAGCAATGGGAACAGATATTTTAAAGTCATTGCAATTCATTTGGTTTGTATCCAACTCTG  
ACTAATTCGTGGATTGGTTAATGATTATTTATCTATGACTCACTACTTTGGATTGTAGGTATCCACGGTGGCAAGCATTTGTT  
TTTGCAATTTGTTAGTCCAATTGCTCTTGTCAACATGGCTGAAAATGCTGTGGCGGGCACTTCGCTGTTGCAGGTGAATTTTCT  
AATATGTTTGTAATTGCAGGTGGTTCTGGTGCAACTTTAGGACTATGTTTATATATTGCTTTTGCCTCTAAATCTGAACAGCTT  
AAAGCAATAGGACGAGCATCTGTAGTTCCAGCCTTATTTAATATTAATGAACCATTAAATTTTGGATTACCTATTATCTATAA  
TCCAGCCTTGGCTATACCATTTATTTAGCACCAATGGTACTGCTACTATTTATTACGTAGCGAATTCTTAACTTTATTA  
GCCAATTATCGCACAGGTTCCATGGCCAACCTCCAGTAGGGATTGGAGCTTTCTTAGGGACAGCAGATCTTCGAGCTGTATTA  
GTTGCTCTAGTATGTGCAATTTGCAGCATTCCTAGTCTATCTTCCATTCATCCGTGTATATGATCAAAAAATTGGTGAAAGAAGA  
GCAAGGTATCTAA

4155.1 (SEQ. ID. NO. 268)

ATGAAAAAATTTATGTAAGTCCAATTTTCTTATCTAGTAGGATTGATTGCGTTTGGAGTCTTATCCACTTTTCAATTTTTT  
GTTAATAATAATCTGTTGACGGTTTTAAATTTGTTCTTTTTGTAGGAGGCTATGTTTTTTTATTAAGAACTGAGAGTGCA  
TATACAAGGAGTGATGTAGAACAGATACAGTATGTAAACCACCAAGCGGAAGAAAGTTTGACAGCTCTATTGGAACAGATG  
CCTGTAGGTGTTATGAAATTGAATTTATCTTCTGGAGAGGTTGAGTGGTTTTATCCCTATGCTGAATTGATTGTACCAAGGA  
AGATGGTGATTTGATTTAGAAGCTGTTCAAACGATTATCAAGGCTTCAGTAGGAAATCCGTTCTACTTATGCCAAGCTTGGT  
AGAAGCGTTATGCTCTTCAATGGATGTTCTTCCGGTGTGTTGATTGTTGATGATGTATCCAGGGAACACGATAACAGAT  
GAATTGGTAACAAGTAGACCAGTGATTGGGATTGTCTCTGTGGATAATTATGATGATTGGAGGATGAAACTTCTGAGTCAG  
ATATTAGTCAAAATCAATAGTTTGTAGCTAATTTATATCAGAGTTTTAGAAAAACACATGATGTTTTCTCGCGGTAAGT  
ATGGATCGATTTTATCTATTTACTGACTACCGGTGCTTGAAGGCTTGATGAATGATAAATTTCTGTTATTGATGCTTTCAGA  
GAAGAGTCGAAACAGAGACAGTTGCCCTTGACCTTAAGTATGGGATTTTCTTATGGCGATGGAAATCATGATGAGATAGGGA  
AAGTTGCTTTGCTCAATTTGAACCTTGGCTGAAGTACGTGGTGCCGACCAAGGTGGTTGTTAAGGAAAACGACGAAACGAAAAA  
TCCAGTTTATTTTGGTGGTGGGCTGCTGCTTCAATCAAGCGTACACGGACTCGTACGCGCGCTATGATGACAGCTATTTCAG  
ATAAGATTCCGAGTGATAGTACGGTTTTTGTAGTCGGTCAAAAAATTTAGACATGGATGCTTTGGGCTAGCTGTAGTTATG  
CAGTTGTTCCGACGAATGTGATTGAAAATAGCTATGCTCTTATGATGAAGAACAATGTCTCCAGATATTGAACGAGCTGT  
TTCATTATAGAAAAAGAAAGGAGTTACGAAGTTGTTGCTGTTAAGGATGCAATGGGGATGGTGACCAATCGTTCTTTGTTG  
ATTCTGTAGACCAATCAAGACAGCCTTAACATTAACAAAGAATTTATGATTATTTACCCAAACCATTTGTTATTGACCA  
CCATAGAAGGGATCAGGATTTTCCAGATAATGCGGTTATTACTTATATCGAAAGTGGTGCAAGTAGTGCCAGTGAGTTGGTA  
ACGGAATTGATTCAGTTCCAGAATTCTAAGAAAAATCGTTTGTAGTCGTATGCAAGCAAGTGTCTTGATGGCTGGTATGATGTT  
GGATACTAAAAATTTACCTCGCGAGTAAGTACGCGACATTTGATGTTGCTAGCTATCTCAGAACGCGCGGAAGTGATAGT  
ATTGCTATCCAGGAATCGCTGCGACAGATTTTGAAGAATATCGTGAGGTCATGAACTTATTTACAGGGGCGTAAATTAG  
GTTGAGATGTAATAAGCAGAGGCTAAGGACATGAAATGCTATGATACAGTTGTTATTAGTAAGGCAGCAGATGCCATGTT  
AGCCATGTCAGGTATTGAAGCGAGTTTGTCTTGCGAAGAATACACAAGGATTTATCTCTATCTCAGCTCGAAGTCGTAGTA  
AAGTGAATGTAACAAGGATTTAGGAAGAGTTAGGCGGTGAGGCCACTTTAATTTGGCAGCAGCTCAAATTAAGATGTAAC  
CTTGTCAGAACGAGGTGAAAAACTGACAGAAATTTGATTAAATGAAATGAAGGAAAGGAGAAAGAAGATGA

4156.1 (SEQ. ID. NO. 269)

ATGAAAGAGAAAAATATGTGGAAGAATTTGTTGAATCGTGCAGGCTGGATTTTGGTCTTTTTACTTGCCGCTCTTTTATATCA  
GGTTCCCTAGTGGTTACCTCTATTTTGACTTTAAAGAAAGTAGCCCTGCTACAGTCAGGGCTGATAGTTGCTGGCCTTTCAA  
TTGTGGTTCTGGCTCTATTTATATGGGAGCTCGTAAACCAAGTTAGCTAGTTTAAATTTTCTTTTTTAGAGCTAAAGATT  
TGGCAGCTTTGGGCTTGAGTTATCTAGTTATTGTGGGTCAAATATACCTTGGTCCATTTATTGCAACTGCAAAATGAGAGC  
ACAACAGCTAACCACTCAGATTAAATGATATGGTTCAAAATAGTTCTGTTGATTTCAGTTTCTTCTGCTAGCCTTGCTTGT  
CCGATTTGTGAGGAAATCTTGTGTCGTGGGATTGTTTCTAAAAAGATTTTCCGAGGCAAGGAGAACTTGGGATTTGTAGTCG  
GTACGATTTGTGTTTGTCTTATTGTCATCAACCAAGTAATTTACCTCTTTATTTGATTATGGAGGTATGTCGACAGTTCTATCT  
GGACAGCCTACAAGACCAACGTTTGGAAATGTGCGATCTGCTTCCACATGATTGTTAATGGGATTGCTTGTGTTGCT  
CTTGTGGTGATTATGAGTCGGACATTAGGAATTTCTGTTTAAATGAAAGAGAAAAATATGTGGAAGAATTTGTTGAATCGTG  
CAGGCTGGATTTTGGTCTTTTACTTGCCGCTCTTTATATCAGGTTCCCTAGTGGTTACCTCTATTTGACTTTAAAGAAAG  
TAGCCCTGCTACAGTCAGGCTGATAGTTGCTGGCCTTCAATTTGTTGTTCTGGCTCTATTTATGGAGCTCGTAAACCC  
AAGTTAGCTAGTTTAAATTTTCTTTTTAGAGCTAAAGATTTGGCACGTTTGGGCTTGAGTTATCTAGTTATTGTCGGGTCA  
AATATACCTGGTTCCATTTTATGCAACTGTCAAATGAGACGACAACAGCTAACCAAGTCTCAGATTAATGATATGGTTCAAAA  
TAGTTCGTTGATTTCCAGTTTCTTCTGCTAGCCTTGCTTGTCCGATTTGTGAGGAAATCTTGTGTCGTGGGATTGTTCTCTAA

AAAGATTTTCCGAGGCAAGGAGAACTTGGGATTTGTAGTCGGTACGATTGTGTTTGCTTTATTGCATCAACCAAGTAATTTAC  
CTTCTTTATTGATTTATGGAGGTATGTGACAGTTCTATCTTGGACAGCCTACAAGACCCAACGTTTGGAAATGTGATCTTG  
CTTCACATGATTGTTAATGGGATTGCTTTCTGTTTGTGGCTCTTGTGGTGATTATGAGTCGGACATTAGGAATTTCTGTTAA

4156.4 (SEQ. ID. NO. 270)

ATGGATACACAAAAGATTGAAGCGGCTGTAAAAATGATTATCGAGGCTGTAGGAGAGGACGCTAATCGCGAGGGCTTGACG  
GAAACACCTGCTCGTGTAGCCCGTATGTATCAAGAGATTTTTTCAGGTCTTGGTCAAACAGCAGAGGAACATTTGTCAAAAT  
CCTTTGAAATTTATTGACGATAATATGGTGGTAGAAAAGGATATCTTTTCCATACCATGTGTGAACACCACTTCTTGCCATTTT  
ATGGTAGAGCGCACATTGCCTACATTCCAGATGGTGTGGCAGGCTTGTCTAAGCTAGCCCGTACGGTTGAAGTTTATTTCG  
AAAAAACCAAAATTCAGAAGCATTGAATATCGAAGTGGCGGATGCCTTGTATGGACTATCTAGGTGCTAAAGGAGCCTTTG  
TTGTCATTGAGGCGGAACATATGTGTATGAGTATGCGTGGTGTAGAAAACCAGGCACTGCAACCTTGACGACAGTAGCTCG  
TGGTCTATTTGAAACAGATAAGGATCTCCGTGACCAAGCTTATCGTTTAAATGGGGCTATAA

4157.2 (SEQ. ID. NO. 271)

ATGAAAGACTTGTTTTTTAAAGAGAAAAGCAGGCCTTTTCGTAAGGAGTGTCTTGGTTATCTGCGCTATGTGCTCAATGACCCTT  
TGTCTTGTCTGCTTGTCTGCTTTTCTAGCCTACCACTACAGTCAACTCTTACAACATTTTCTGAAAATCATTGGCC  
TATCCTTTTGTGTAGGAATTACGTCTGTTTACTTTTACTTTGGGGAGGAACTGCCACCTATATGGAGGCTCCAGACAAGCT  
CTTTCTTATGTGGAGAAGAGGAAATTAAGCTCCATCTCAAGCGTCAAACCTGGCATTTCCTAGTCTTTTGGCTCTTTGTACA  
GACCTTTTCTGCTGTTATTGCGCTTTATTTTACCAATGGTTATGGCTTGCAGTTTCTGCTCTATGCTGCTTTTATTG  
GGGGTAGGAAAATATTTCACCTTTTGTCAAAAAGGCCAGCAAAATTTTACTGAAACTGGACTGGACTGGGACTATGTTATTTC  
TCAAGAAAGCAAGCGTAAGCAAGTCTTGCTTCGTTTCTTTGCCCTCTTTACGCAGGTCAAGGGAATTTCAAACAGCGTTAAGC  
GTCGTGCTATCTGGACTTTATTTTAAAGGCTGTTTCAAGGTCGCTGGGAAGATTTGGCAAAATCTCTATCTGCGTCTTAT  
CTGCGAAATGGCGACCTCTTGTCTCAGTCTTCTGCTCTTCTTGTCTTCTTGTCTTGGCGCAGGTTTATCGAGCAAGCTTGG  
ATTGCGACAGCAGTGGTAGTTCTTTAACTACCTCTTGTCTTCCAGTTGCTGGCCCTCTATCATGCCCTTGGACTACCAGTAT  
TTGACCCAACTCTTTCCGCTGGACAAGGGGCAAAAGGAAAAAGGCTTACAGGAGGTAGTTGAGGATTGACCAAGTTTGTGTT  
TACTTGTGGAATTAGTTGTTGGGTTGATTACCTTCCAAGAAAACTAGCCCTTCTAGCCTTACTAGGAGCTGTTTGGTTTAC  
TAGCTTGTATTGCTTTATCAGGTAAAACGTCAGATGCAGGACTAA

4158.1 (SEQ. ID. NO. 272)

ATGAGAAAATCAATAGATTAGCGGCAGATAATGCCTATCTTATTCCTTTAGAGACGACTATAAAGTCTGTATTGTATCACAA  
TAGAGATGTTGATTTTATATTCTCAACAGTGATATAGCTCCTGAATGGTTTAAATTATTGGGGAGAAAAATGGAAGTTGTGA  
ATTCTACAATTCGCAGTGTACACATTGATAAAGAACTTTTGAAGCTATAAAACAGGACCTCATATAAATTATGCTTCTTAC  
TTTAGATTTTTCGCACAGAAGTGGTTGAATCTGATAGGGTATTGTATCTGGATTCCGATATCATTGTAACCTGGGGAACAGC  
TACTTTGTTTGAGATAGATCTCAAAGGATATTCAATTGGTGTCTTGTATGATGCTATGCCTATGAAGGACGAAAAATCTGGAT  
TTAATACTGGTATGTTACTAATGGATGTTGCAAAAGTGGAAAGAACATTCTATTGTCAATAGTTTATTGGAATTAGCGGCCGAG  
CAGAAATCAAGTTGTTCTATCTGGGATCAGAGTATTTAAATATTTATTTGAGGATAAATTGGCTAGCCTTAGATAAAACATA  
TAATTATAGTGGTGGTATTGATATTTATCACCTTGTCTCAAGAATGTGAACGCTAGATGACAATCCACCTACAATTGTTCACT  
ATGCTAGTCATGATAAACCTTGAATACATATAGTATATCTAGACTACGTGAATTATGGTGGGTTTATAGAGATTGGATTGG  
TCAGAGATTGCTTTTCAACGTTCCGATTAAATTTTGAAGAAGCAATCAGTCTAAAAAACAAGTGATGCTTGTGACATG  
GAGTGCAGATATAAAACATTTAGAGTATTTAGTACAACGTTACCTGATTGGCATTTCATTGGCTGCACCGTGTGATTGTT  
CTGAGGAGCTGACCTCTCTATCACAGTATACGAATGTAAACAGTATATCAAAATGTATTACATAGTAGAATTGATTGGCTATTG  
GACGATTCTATAGTTTATTTAGATATTAATACAGGTGGAGAGGTTTAAATGTAGTTACAAGGGCACAAGAAAGTGGCAAGA  
AAATCTTCGCTTTTGATATCACACGTAAGATATGGATGATGGACTCTATGACGGTATTTTTCTGTGGAGAGACCAGATGAT  
TTAGTGGATAGAATGAAGAATATAGAGATAGAGTAA

4158.2 (SEQ. ID. NO. 273)

ATGACTAAGATTTATTCGTCAATAGCAGTAAAAAAGGACTATTTACCTCATTTCTACTGTTTATCTATGTATTGGGAAGTCG  
TATTATCTCCCTTTTGTGACCTAAATACTAAAGATTTTTTAGGAGTTTCAACAGCCTATCTAGCCTTCTCAGCCGCCCTAAC  
AGGTGGGAATCTAAGAAGTTTATCAATTTTTTCTGTTGGATTATCCCTTGGATGTCCGCCATGATTTTATGGCAGATGTTTC  
TTTTCTAAACGGTTGGGTTTAACTCTACGTCTATAGAAATACAAGATCGCCGTAAAAATGTACCTGACCTTGTAAATGCTG  
TGATTCAATCCTTGGCAGTTAGCTTGAGACTGCCAGTACAATCCCTCTTCTGCAATATTGGTTGTTCTAATGAATAACAAT  
TGCTGATAGCAGAACATTTTTTCTTGTGTTGTTGTCAGATTTAAATGCGAGTATGGGGATTGGAGGTTCTATTGTAATCCTCC  
TATCCAGTATGGTTTTAAATATTCCTCAGGATGTTTGGAAACATTTTACAGACGTACACATTCCAACAGGATATTGTGTTA  
CTTGCTTTATTAACCTTGTCTTTCTTATTTACTTGCCTTATGTATCGAGCTCGCTATTTGGTTCTGTTAATAAAATTTGGCT  
TACACAATCGATTTAAACGCTATTCTTATCTCGAAATCATGTTGAATCCTGCAGGTGGGATGCCTTATGTATGTGATGAGT  
TTTCTTAGTGTACCAGCTTATTTGTTCTCTTGTGGGATTTATTTCCCTAATCATTACAGGTTAGCGGCTTTATCAAAGGAA  
TTTTATGGTTGGAAAGCCTTTGTGGGTCTATGTTTATTTTCGGTCTTATTTTATTTAGTATCATTTTGTCTTTGTTACGATGA  
ATGGAGAAGAGATTGCAGACCGTATGAAAAAATCTGGAGAATACATTTATGGTATTATCCAGGTGCGGATACTAGTCGATT  
TATTAATCGATTGGTCTTTCGTTTCTCAGTCATAGGTGGTCTCTTAAATGTGATTATGGCAGGTGGTCCCATGCTTTTGTGTTG  
TTTGATGAAAAGTTATTACGATTGGCAATGATTCCAGGCTTATTTATGATGTTCCGGGGCATGATTTTACGATTAGAGACGA  
GGTCAAGGCTTTAAGGCTAAATGAGACCTATAGACCTTTGATTTAG

4158.3 (SEQ. ID. NO. 274)

ATGTCCTCTCTTTCCGATCAAGAATTAGTAGCTAAAACAGTAGAGTTTCGTCAGCGTCTTTCCGAGGGAGAAAGTCTAGACG  
ATATTTTGGTTGAAGCTTTTGTCTGGTGGTGCAGTGAAGCAGATAAGCGGATTTTAGGGATGTTTCTATGATGTTCAAGTCATG  
GGAGCTATTGTCATGCATATGGAAATGTTGCTGAGATGAATACGGGGGAAGGTAAGACCTTGACAGCTACCATGCCTGTCT  
ATTTGAACGCTTTTTCAGGAGAAGGAGTGATGGTTGTGACTCCTAATGAGTATTTATCAAAGCGTGATGCCGAGGAAATGGG  
TCAAGTTTATCGTTTTCTAGGATTGACCATTTGGTGTACCATTTACGGAAGATCCAAAGAAGGAGATGAAAGCTGAAGAAAAG  
AAGCTTATCTATGCTTCGGATATCATAACCAACCAATAGTAAATTTAGGTTTGTATTATCTAAATGATAAGCTTCTTACTAAA  
TGAAGAAGGTAAGTTTTTACGACCGTTTAACTATGTGATTATTGATGAAATTTGATGATATCTTGCTTGATAGTGCACAACTC  
CTCTGATTATTGCGGGTCTCTCTCGTTCAGTCTAATTACTATGCCATCATTGATACACTTGTAAACAACCTTGGTGAAGGA  
GAGGATTATATCTTTAAAGAGGAGAAAGAGGAGTTTGGCTCACTACTAAGGGGGCAAGTCTGCTGAGAATTTCTAGGGGA  
TTGATAAATTTATACGTAAGAGCATGCGCTCTTTGCTCGTCAATTTGGTTTATGCGATTTCGAGCTATAAGCTTCTTACTAAA  
GATAAGGACTATATCATTCTGGAAATGAGATGGTACTGGTTGATAAGGGAACAGGGCGTCTAATGGAATGACTAACTTC  
AAGGAGGTCTCCATCAGGCTATTGAAGCCAAGGAACATGTCAAATTATCTCCTGAGACGCGGGCTATGGCTCGATCACCTA

TCAGAGTCTTTTAAAGATGTTTAAATAGATATCTGGTATGACAGGGACAGGTAAGGTCGCGGAAAAAGAGTTTATTGAACT  
TACAAATATGTCTGTAGTACGCATTCCAACCAATCGTCCGAGACAACGGA  
TTGACTATCCAGATAATCTATATCACTTTACCTGAAAAAGTGATGCATCCTTGGAGTACATCAAGCAATACCATGCTAAG  
GGAAATCCTTTACTCGTTTTGTAGGCTCAGTTGAAATGTCTCAACTCTATTCTGCTCTCTTGTTCGTGAAGGGATTGCCCAT  
AATGCTCTAAATGCTAATAATGCGGCGCTGAGGCTCAGATTATCTCCGAGTCAGGTCAGATTGGGGGCTGTGACAGTGGCTA  
CCTCTATGGCAGGACGTGGTACGGATATCAAGCTTGGTAAAGGAGTCGCAGAGCTTGGGGGCTTGATTGTTATTGGGACTGA  
GCGGATGGAAGTCAGCGGATCGACCTACAAATTCGTGGCGCTTCTGGTCTGCAGGGAGATCCTGGTATGAGTAAATTTTT  
GTATCCTTAGAGGATGATGTTATCAAGAAATTTGGTCCATCTTGGGTGCATAAAAAAGTACAAAGACTATCAGGTTCAAGATA  
TGACTCAACCGGAAGTATTGAAAGGTCTGTAATACCGGAAACTAGTCGAAAAGGCTCAGCATGCCAGTGATAGTCTGGAC  
GTTACGACGCTCGTCAGACTCTGGAGTATGCTGAAAGTATGAATATACAACGGGATATAGTCTATAAAGAGAGAAATCGTCT  
AATAGATGGTCTCTCGTACTTAGAGGATGTTGTTGTGGATATCATTGAGAGATATACAGAAGAGGTAGCGGCTGATCACTAT  
GCTAGTCGTGAATATTGTTTCACTTTATTGTGACCAATATTAGTTTTCATGTTAAAGAGGTTCCAGATTATATAGATGTAAC  
GACAAAACCTCGAGTTCTGAGCTTTATGAAGCAGGTGATTGATAAAGAACTTTCTGAAAAGAAAGAAATTACTTAATCAACATG  
ACTTATATGAACAGTTTTACGACTTTCAGTCTTAAAGCCATTGATGACAACTGGGTAGAGCAGGTAGACTATCTACAACAG  
CTATCCATGGCTATCGGTGGTCAATCTGCTAGTCAGAAAAATCCAATCGTAGAGTACTATCAAGAAGCCTACGCGGGCTTTG  
AAGCTATGAAAGAACAGATTATGCGGATATGGTGCGTAATCTCCTGATGGGGCTGGTTGAGGTCACTCCAAAAGGTGAAAT  
CGTGACTIONTTTCCATAA

4158.4 (SEQ. ID. NO. 275)

ATGATAGGGACTTTTCGCGCTGCTCTTGTAGCTGTACTAGCAAAATTTATCGTCCCTATTGAAATTACCCCAATAGTGCCAA  
TACTGAAATTGCACCACCAGATGGGATTGGGCAGGTTCTCAGCAACCTCTTGCTCAAACCTGGTTGACAACCCAGTCAACGCC  
CTGCTTACTGCTAACTATATTAGAATCTTATCTTGGGCAGTCAATTTTGAATCGCTATGAGAGAAGCCAGTAAAAATAGTCA  
AGAATTGCTAAAAACCTTTCTGACAAGGGAGTCGGAAGCCTTGCCAACTACGGTATTTTATTGGTCTATTAGTAACGACTATG  
TTGTTTTTAAAAACCTTTCTGACAAGGGAGTCGGAAGCCTTGCCAACTACGGTATTTTATTGGTCTATTAGTAACGACTATG  
CTTTTTGTTGCCCTGTGGTCAACCCCTTTGATTGCCTTCTCTTTATGAGACGCAATCCTTACCCTCTAGTTTGGAACTGCCCTC  
GTGTCACCGGTGTGACAGCCTTTTTCACTCGTAGTTCTGCGACTAACATCTCTGTCAACATGAAACTCTGCCATGACCTTGA  
CTCAACCCAGATACCTATTCTGTTTCTATCCCACTCGTTCTACTACTCAATATGGCTGGAGTAGCGATTACCTAATCACTTTG  
ACCCTTGCTGCAGTTAACACTCTTGAATTCCTGTTGACTTTGCCACAGCCTTTGTCTCAGTGTGGTAGCAGCTATCTCATCC  
TGTGATGCTTCAGGATTGCGCGGAGGTTCCCTCCTTCTATCCCACTGCTTGTAGCCTTTTCGGTATTTCTAACGATATTGCC  
ATACAAATCTTGGGTTGGTTTGTGATTGGTGCTCAACAGACTCATGTGAAACAGCCCTTAACCTCTTCTACAGATGTCTCT  
CTTACCCTGCTTGGCAATACGCAGCAACCCGTAATAAATAA

4158.5 (SEQ. ID. NO. 276)

ATGTCTATTAGCCAACGTACGACCAAGCTCATCTTAGCTACCTGTCTTGCTGCTGCTGCTGCTTATTTTCTCAATCTTTCGTCA  
GCAGTTTCGGCTGGAATTATCGCTCTCTTGAGCCTATCTGATACGCGTAGAAGTACTTTAAACTGGCTCGCAATCGTCTTTTT  
TCTATGCTTCTAGCTCTGGCTATCGGTGTTCTAGCTTTTCACTTGACGCGATTTCATATCTGGAGTCTCGGCCCTCTATCTGGCC  
TTCTACGTTCTTTAGCCTACAAGATGGGCTGGGAAATGGCATACACCAAGCACTGTTTGGTTAGCCATCTCTTGGTTCA  
AGAGTCAACCTCTCCAGACCTTCTAGTCAATGAATTCCTTCTCTTTGCTATTGGTACAGGATTGCTTGTGTTAATCTCTA  
TATGCCCTTACGAGAAGAGGAAATCCAGCACTACCACACGCTGGTGGAAAGAAAAGTTAAAGATATCCTCCAGCGCTCAA  
ATACTATTTATCCAGAGGAGACGGACGCAACCCGAGCACAGCTGGTAGCAGAATTAGACACGCTTTTGAAGAAGCCCTCAG  
ACTGGTCTATTGGATCACTGTGACCACCTCTTTTACCCAGCAGTACCATACCTATCCACTACTTTGAGATGAGACAGCGACAAA  
GTCGTATCCTGAGAAACATGGCCCAACAGATTAACACTTGTCACTTGGCCCGCAGTGAAGCCTGATCTTAGCGCAACTCTT  
TCAAAAATTTGCAGGTCAACTGAGCCAGACCAATCCTGCTTCTGATTGCTAGATGAAATTTGAACGTTATCTGGAAGCTTCCG  
GAACCCGAGTCTGCCAAGACAAGAGAAGAAATTTGAAACCCGCGCCACCTTCTCAACTCCTACGTGAAGCCAAAACCTTC  
ATCCAAGTAAAGTTGATTTTTACCAAAAATATAGACAGTAA

4158.6 (SEQ. ID. NO. 277)

ATGGAATCATGTGCTGCTTGGGATTGCTGTTTTTGGCGTCATATTGGTTTATGTCATTGGATATGTCAGCATCTCAGCTAAGATG  
AAATCATCTCAGGAAGCTGCAGAGTTGATGCTTTTAAATGCTGAACAAGAAGCAACTAATTTACGTGGACAAGCTGAGCGTG  
AAGCGGATTACTTGTAAATGAAGCCAAACGTGAAAGCAAGTCTTTAAAAAAGAAGCACTATTGGAGGCCAAAGAAGAAG  
CCAGAAAATACCGTGAAGAAGTGGACGCTGAATTCAAATCAGAACGTCAGAACTCAAAACAAATCGAAAGTCGTTGACAG  
AGAGTCAACCTCTCCAGACCTTCTAGTCAATGAATTCCTTCTCTTTGCTATTGGTACAGGATTGCTTGTGTTAATCTCTA  
CTGATAGAGCGAAAAACCTTGATGCGCGTGAAGAGCAATTAGAGGAAGTCGAAAGACAAAAAGAAGCAGAACTAGAGCGT  
ATTGGTGCCTGTCTCAGGCAGAAAGCAGAGATATTATCTTGGCTCAGACAGAGGAAAACTTGACCAGGGAGATTGCCAGTC  
GCATTGCGGAAGCTGAGCAAGAGGTCAAGGAACGTTCTGACAAAATGGCCAAGGACATCTTGGTTCAAGCTATGCAACGAT  
CGCTGGTGAATATGTAGCGGAGTCAACAACTCAACAGTTTCATCTGCCAGACGATACTATGAAGGGACGCATTATTGGTCTG  
GAAGGTCGTAACATTCGTACCTTTGAAAGTTTGACAGGGGTCGATGTGATTATCGACGATACACCAGAAGTGGTGACCTTGT  
CAGGATTTGATCCGATTCTGCTGAGATTGCCCGTATGACTATGAAAATGTTGCTCAAAGATGGTCTATACATCCAGCTCGT  
ATCGAAGAGTTGGTTGAGAAAAACCGTCAAGAGATTGCAATAAGATTTCGTGAATACGGTGAGGCTGCTGCCTATGAAATTG  
GTGCGCCAAACCTTCATCCAGACTTGATGAAGATTATGGGACGTTTGCAGTTCCTGATGATGGAACAAATGTTTTGCGC  
CATTGATTGAGGTTGCTAAGTTGGCTGGTATCATGGCGAGCGAACTTGGTGAAAATGCGGCTCTTGCCCGTCTGCTGGATT  
CCTTCAGGATATCGGGAAGCCATTGACCATGAGGTTGAAGGTAGCCACGTTGAAAATCGGTATGGAATTGGCCCGTAAAGTAC  
AAGGAACCCCCAGTTGTGGTGAATACGATTGCTAGTACCACCGGAGATGTTGAAGCTGAGAGCGTGATAGCAGTTATCGTCG  
CTGCAGCAGATGCTTGAAGCGCAGCCGTCAGGTGCTCGTAGTGAGTCTCTTGAAGCTACATCAAGCGTCTCCATGATTG  
GAAGAAATTTGCTAACGGCTTTGAAGGAGTGCAAACTAGCTTTGCCCTTCAAGCAGGACGTGAAATTCGTATCATGTTGATC  
CAGGAAAAATCAAGGACGCAAAAGTCAAACTTGGCTCACAAGATTCGTAAGAAAAATTGAAAACAACTCTCGATTATCCAG  
GAAATATCAAGGTAACCGTGATTGCGGAGCTTCTGTCAGTAGATTATGCTAAATAA

4158.7 (SEQ. ID. NO. 278)

ATGATGTTAAACCTCTATTGATACCTTGCTCGACAAGGTTTCTTCAAAAATATTCACTCGTAATCTTGAAGCAAAACGTGC  
CCACGAATTGGAAGCAGGTGCCCGAGCAACTCAAGGTTTCAAGTCTGAAAAATCAACTCTTTCGCGCTTTAGAAGAAATCGAA  
TCAGGAAACGTTACAATTCACCCAGATCCAGAAGGAAAAACGTGAAGCAGTGCCTGCGCGTATCGAAGAGAAAAACGCCGC  
AAAGAAGAAGAAGAAAAAGAAATCAAAAGGCAAAATTGCTAAAGAAAAAGAGATGGTGAAAAAATTTAA

4161.1 (SEQ. ID. NO. 279)

ATGTCAGCATATCAATTACCGACCGTATGGCAGGATGAAGCTAGTAATCAAGGAGCTTTTACGGGGGCTAAACAGACCAACAG  
CAGGTGCCCGCTTTCCGACAAAACCTTGCCAAAAGGAGAACAAAGCTTTTACGCTTTATTTACTGGGAACACCAAATGGTGTAAG  
GGTTACTACTTTATGGAAAGAACTTACTAGAACGCTGGTTTTAAAGGAAGCGGCTTACGACTTGTATAAGATTGCTATCATGGTAT  
GGGATCAATTCGGATCAGACTTTGTGAAGCTCAATCCAAATTCCAAGATTCCAGCCTTATTGGACCAGTCAGGTACTGAAAA  
CGTAAGAGTCTTTGAGTCTGCTCATATTTCTTTTACCTTGCTGAGAAATTTGGAGCCTTTTACCAAGTAATCTCTGTGGAAAA  
GGTAGAAGTTTTGAATTTGGCTATTTCTGGCAAGCAGGTGCAGCACTTTTCTAGGTGGGGGATTTGGACATTTCTTCAATTATG  
CTCTGAAAAAATTTGGAATATCCTATTAACCGTTTTACGATGGAAGTGAAACGCCAGTTGGATTTATTGGATAAGGAATTGGCT  
CAGAAACCTTATATTGCAGGCAATGACTATACGATTGCAGATATTGCTATCTGGTCTTGGTATGGACAGTTAGTTCAAGGAA  
ATCTTTACCAAGGTTCTGCAAAATTTCTGGATGCCTCAAGTATCAAAATCTAGTAAAAATGGGCAGAAAAAATTGCCAATCG  
TCCAGCTGTTAAGCGTGGCTTTGGAAGTAACATTATACAGAAATTTAAATAG

4161.2 (SEQ. ID. NO. 280)

TTGGCAAGCTTGATCACTTCTATCATCATGTTCTATGTGCGTTTCGATGTTCTAAGAGATACCAATTCAAAGATTCTCAGTCGG  
GAAGAAACGGTCATTGATCCTCTTTGGTGAACCTCTAGGAATCATTTCTGCAGCGATTATGTTTGTTGGTCTATCTCTACAATAC  
TCGCGCTCAGTAAGAAATCCAACCTCCAATGCGCTGAAGCGAGCTGCTAAGGACAATCTTTCTGACGCTGTTACCTCATGGGA  
ACCGCCATTGGCATCCTAGCTAGTAGTTTCAATTATCCGATTGTGGATAAACTGGTGTCTATCATCATCACTTCTCTTATCTTG  
AAGACTGCCTATGATATCTTCATCGAGTCTTCTTTAGTCTTTCAGATGGCTTTGACGACCGCCTGCTCGAGGACTACCAAAA  
GGCTATCATGAGAAATCCCAAAATCAGCAAGGTCAAATCGCAAAGAGGTCGCACTACGGTAGCAACATCTACCTGGATATT  
ACACTAGAGATGAATCTGACTGTCTGTTTGAAGCCATGAAATCGCGGATCAGGTGAGTCTATGTGTGAGGAGCGCTT  
TTGGCGTCTTTGATACCGGATGTCCATATCGAACCAGCACCTATCCCTGAGGATGAAATTTTAGACAATGTCTATAAAAAATTG  
CTTATGCGTGAAACAATTGATTGACCAAGGAAACCAACTAGAAGAACTTTGACTGATGATTTTGCTATATTTCGCCAAGATG  
GAGAGCAGATGGATAAAGAGGCTTATAAGACCAAAAAAGAGTTAAATTCTGCTATCAAGGACATTCAAATTACTTCCATCAG  
TCAAAAAACCAACTCATCTGCTATGAGTTAGTATCATCCATACCAGTATCTGGCGTCGCCACGAAACCTGGCAAAAT  
ATCTTTTCATCAAGAAACCAAAAAAGATAG

4162.1 (SEQ. ID. NO. 281)

ATGACAATAAAGCTATAGCAACGGATATGGACGGAACCTTCTAGATGGGAATGGACGCTTTGATATGGATCGTCTCAAGT  
CTCTCTTGGTTTCTACAAAGGAAAAAGGGATTACTTTGCGGTAGCTTCGGGTCGGGGGATTTCTGTCTAGAAAAAATTATT  
GCTGTGTTCTCGTGATGACATTATTTCTACGCGGAAAAATGGCAGTTTGGTAGAGATCAAGGTACGAGCTTGTATGAAGCGA  
CTATGTCCTCGTGACTTTTATCTGGCAACTTTTGAAAGCTGAAAACTTCACCTTATGTAGATATCAATAAACTGCTCTTGACG  
GGTAAGAAGGGTTTCATATGTTCTAGATACGGTTGATGAGACCTATTTGAAAGTGAGTACGACACTAATGAAAAATATCCAAA  
AAGTAGCGAGTTTGGGAAGATATCACAGATGACATTTTCAAATTTACAACCACTTACAGAGAAGAACCGTGGGAAGATGGGG  
AGGCTTGGGTAACGAAAAACGTTTCTGGTGTTAAGGCCATGACAACCTGGCTTTGAATCCATTGATATTGTTCTGGACTATGTC  
GATAAGGGAGTGCCATTGTTGAATTAGTTAAAAAACTTGGTATCACAATGGATCAGGTCATGGCTTTGGAGACAATCTTA  
ATGACTTACATATGATGCAGGTTGTGGGACATCTCTGATGCTCTGAAAAATGCACGACCTGAAATTTTGAAGATTAGCAAAGAC  
TGTGATTGGTACCATAAAGGAACGGTCGGTTATAGCTTATAGTTCGAGGGCTTATAA

4162.2 (SEQ. ID. NO. 282)

ATGCGCACTATAAAATTTGATTGCATTGGACTTGGACGGGACCTTGCTGACTACTGATAAAAGGCTGACGGATCGTACCAAGG  
AAACCTTGCAGAGCTCGCGGTGATCGTGGTATCAAGGTCGTATTGACAACCTGGTCGTCCTTAAAAAGCCATGGATTTCTTTCTC  
CATGAGTTAGGAGCTGACGGTCAGGAAGATGAGTATACCATTTCTTTAATGGTGATTAGTTCAGAAAAATACAGGAGAAA  
TCCTTGATAAAACAGCTGTTTCATATGATGATGGGCAGTTTGTATGAAGAAACAGAGAAATATCACTGCCTCTTGATGCC  
ATCTCAGAAGGAACAGTTATCAAAATCCAATCGGACCAAGAAAGCTCTTATGCCAAATTCAAATCCAGCTTTGACCTTTGTGCC  
AGTGGAATTTGAAGACTTACTAGTCAAAATGACCTACAACAAATGCGTGACTGCCTTTGCTCAAGAACCCTTGGATGCAAGC  
ATTCAAGAAGATTTCCAGAAATTTGTTTGACCAATATGAATCTTTAAATCAGTGAAATGTTGCTAGAATGGTCACCAAGA  
ATGTTTCATAAAGCAATAGTATTGGCAAACTAATCAGGCATCTTGGAACTGACCAAAAGTCAAGATGGCTTGTGGTGACGA  
GGCCAAATGACCTCTCTATGTTGAATGGGCAAGTCTTGGTGTGCTATGCAAAACGCTGTTCTGAATGAAGGACGCCGCA  
AATGTAGTGACGCCGATGACCAACGATGAGGAAGCTTGCGCTGGGCTATCGAAGAATATGTGCTAAAGGAGAAGCTAA

4164.2 (SEQ. ID. NO. 283)

4109.2 (SEQ. ID. NO. 283)  
ATGGAAGATTCTACTTATCTAATTAATTAATTGCCAATCTAGCTGGTCTCTTTCTGATTGGCAAAGGCAGGATAGGCAGGAGAA  
ACACTTAAGTAAGAGCTTGGAGGATCAGGCAGATCATTTGTCAGACCAAGTTGGATTACCGCTTTGACCAAGCCAGACAAGCC  
AGCCAGTTAGACCAAAAAGATTGGAAGTGGTTGTACGCACCGTTTGCAGAAGTGCGGATTGAATTGCACCAAGGTTCTGA  
CCCAAGTCCGTCAAGAAATGCAGATAATCTCCTCCAACTAGAGACAAGACAGACCAACGTCCTCCAAGCCTTGCAGGAATC  
AAATGAGCAACGTTTGGAAACAAATGCGCCAGACGGTGCAGGAAAAAATAGAAAAGACCTTCAGACACCGCTTACAGGCTTC  
CTTTGAGACAGTTTCTAAACAACTGGAGTCTGTCAATCTGGCCTTGGAGAAATGCAGACAGTTGCCGCTGATGTCGGAGCT  
CTTAAACAAGGTTCTCTCTGGAACCAAGACGCGGAGGCTTCTGGGAGAATTGCAACTGGGGCAAATTATTGAAGACATCATGA  
CACCTGCCCAAGTACGAACGAGAAATACGCAACGGTTGAAAACTCTAGTGAACGAGTGGAGTATGCCATCAAGTTACCCGGAC  
AAGCGCACCAAGAATACGCTATCTGCCAATTGACTCTAAGTTTCCACTGGCAGATTATTACCGCTTGGAAAGAAGCCTATGA  
GACAGGTGACAAGGATGAGATTACCGCTGTCTGAAGTCACTCCTAGCAAGCGTCAAGCGCTTGTCTAGGGATATTAGGAAC  
AAGTACATAGCACACCTCGGACGACCAATTTTGAGATTTTGTGTGTTCCGACAGCAAGGTTCTCTACTCAGAAATCGTCCGCAA  
TCCGGTCTCTTTGATGATTTGAGACGGGAAGAACAGATATTGTTGCAGGACCAAGTACCCATACAGCCCTTCTTAATCTCC  
TACTAGTTGGTTTCAAGACCTTAAATATCCAAAAGAGTGCCGACCATATCAGCAAGACTCTTGCCAGTGTCAAGACCGGATTT  
GGCAAGTTTGGTGGTATTTCTGGTCAAGGCACAAAAACATCTCCAACATGCCTCTGGCAATATTGATGAATTAATAACCGTC  
GTACCATAGCTATCGAGCGGACGCTCCGTACATTGAGTTGTCAAGAGTGAGCCTGCGCTGATCTACTCCATTTTCAAGAA  
AATGAGGAAGAAATGGAAGATTAG

4164.3 (SEQ. ID. NO. 284)

4164.5 (SEQ. ID. NO. 264)  
ATGAAGATTAGTCACATGAAAAAGATGAGTTATTGTGAAGCCTTTTACCTAATCAAAATCAGCTGACCTGAGGCAAACTCGAG  
CTGGGAAAAAATACCTAGCCTTTACCTTCCAAGATGATAGTGGCGAGATTGATGGGAAGCTCTGGGATGCCCAACCTCATAA  
CATTTGAGGCCCTTTACCGCAGGTAAAGTTGTCCCAATGAAAGGAGCCGCGAGAAGTTTATAACAATACCCCTCAAGTCAATCAA  
ATTACTCTCCGCCTGCCTCAAGCTGGTGAACCCAATGACCCAGCTGATTTCGAAGGTCAAGTCAACGAGTTGATGTCAAGGAAA  
TTCGTGACTACATGTTCGCAAAATGATTTTCAAATTAAGAAATCTGCTGTGGCAACGGATTGCCGAAATCTCTACACCGAAGTAT  
GATAAGGAATTTCTACTCTACCGAGCTGCCAAGACCAACCACCTAGCCTTTGAAAGCCGGCTTGGGCTATCATACGGCGACCA  
TGGTGCCTTTGGCGACAGCCTATTAGCGAAGTTTATCTCAGCTCAATAAGAGCCTGCTCTATGCGGGGATTATGTTGCATGAC

TTAGCTAAGGTCATCGAGTTGACGGGGCCAGACCAGACAGAGTACACAGTGCAGAGTAATCTTCTTGGACATATCGCTCTCA  
TTGATAGCGAAATACCAAGACAGTTATGGAACCTCGGCATCGATGATACCAAGGAAGAAGTCGTTTTGCTTCGTCATGTCAT  
CCTCAGTCACCACGGCTTGCTTGAGTATGGAAGCCAGTCCGTCCACGCATTATGGAAGCAGAGATTATCCATATGATTGAC  
AATCTGGATGCAAGCATGATGATGATGTCAACAGCTCTTGCTTTGGTGGATAAAGGAGAGATGACCAATAAAATCTTCGCTA  
TGGATAATCGTTCCTTCTATAAACCAGATTTAGATTAA

4166.2 (SEQ. ID. NO. 285)

ATGAGTGAAAAAGCTAAAAAAGGGTTTAAGATGCCTTCATCTTACACCGTATTATTGATAATCATTGCTATTATGGCAGTGCT  
AACTTGGTTTTATCCCTGCGGGGGCCTTTATAGAAGGATTTTACGAGACTCAGCCTCAAAATCCACAAGGGATTGGGATGTCC  
TCATGGCACCAGATTGCGGCTATGCTAGGTACTCATCCAGAGGAAGGTTTCGCTCATTAAAGAAACGAGCGCAGCGATTGATGT  
AGCCTTCTTCATCCTTATGGTTGGTGGTTTCTTGGCATTGTCAACAAAACTGGTGTCTTGACGTAGGGATTGCCTCTATCGT  
GAAGAAGTATAAGGGCCGCGAAAAAATGTTAATTTTGGTACTGATGCCTTTGTTTGCCTCGGTGGTACAACCTATGGTATGG  
GTGAAGAAAAAATGGCCTTCTATCCACTCCTTGTGCCAGTTATGATGGCCGTGGTTTTGATAGCCTGACTGGTGTGCAATT  
ATTTTGTCTCGGTTCTCAAATCGGCTGTTTGGCATCTACTCTGAATCCATTGCGACAGGTATTGCTTCAAGCAGCTGCGGGAGTT  
GGTACAGGGGACGGTATCGTACTTCTGCTGATCTTCTGGTACCTTGACTGCTCTTAGTACTTGGTTTGTACCGTTATGCG  
GATAAGATTCAAAAGATCCGACTAAGTCACTGGTTATAGTACTCGCAAGGAAGATTGAAACACTTTAACGTAGAAGAAT  
CTTCATCTGTAGAATCTACACTTAGCAGCAAAACAAAAATCAGTTCTCTTCTTATTGTGTGACATTCTTGTATGGTATTGA  
GCTTCATTCCATGGACAGACCTTGGCGTTACCATTTTTGATGACTTTAATACTTGGTTGACTGGTCTTCCAGTTATTGGTAATA  
TTGTGCGTTCATCTACTTTCGCACTAGGTACTTGGTACTTCCAGAAAGGCGCAATGCTCTTGCCTTTATGGGTATCCTGATTG  
GTGTTATTTATGCTTTTAAAGAAGATAAGATTATCTCTTCTTATGAATGGTGTCTGCTGACTTGTCTAGTGTGCTTGTATCG  
TAGCGATTGCTCGTGGTATTCAAGTTATCATGAACGACGGTATGATTACCGATACAATCCTCAACTGGGGTAAAGAAAGGCTT  
GAGCGGTCTATCTTCAACAAGTCTTTATCGTTGTAACCTATATCTTCTATCTACCTATGTCACTTCTTGTATCCCATCTTCTATCTGGT  
CTTGGCAGCGCAACTATGGGTATCATGGC  
TCCACTTGGAGAATTTGTAATGTCCGTCCTAGCTTGATTATCACTGCTTACCAATCTGCTTCAGGTGTCTTGAACCTTGATTGC  
ACCAACATCTGGTATTGTGATGGGAGCTCTTGCACCTGGACGTATCAACATTGGTACTTGGTGGAAATTCATGGGCAAACTCG  
TAGTCGCTATTATTGTAGTGACCATCGCCCTTCTTCTCTTGGAACTTCTTCCATTCTCTATAA

4166.3 (SEQ. ID. NO. 286)

ATGAAAAATAGATATAACAAATCAAGTTAAAGATGAATTTCTTATATCATTAAAAACCTTGATTTCCTATCCTTCAGTACTCAA  
TGAAGGAGAAAAATGGAACACCTTTTGGACAAGCAATCCAAGATGTCTAGAAAAAACTTTAGAGATTTGTGAGACATAGG  
TTTCACTACCTATCTTGACCCTAAAGGTTATTACGGATATGCAGAAATCGGTACGGGAGCAGAGCTTCTGGCCATTCTCTGTC  
ATTTGGATGTTGTTCCATCAGGTGATGAAGCAGATTGGCAGACACCGCCATTTGAAGCAACTATCAAAGACCGGTGGGTATT  
CGGACGTGGTGTCCAAGATGATAAAGGCCCTTCGCTCGCAGCTCTTATGCAGTAAAAAGCTTGTGGACCAAGGTATTGAG  
TTCAAAAAAGCGCGTACGCTTTATCTTTGGTACCGATGAGGAACCCCTTGGCGCTGCAATGGCAGCTACAATACCATCGAAG  
AACAGGCCAGTATGGGCTTTGCACCTGACTCATTTTTCTCTGACCTATGCTGAAAAAGGGCTTCTACAGGTCAAACCTTCAT  
GGCCCTGGATCGGATCAACTAGAGCTTGAAGTAGGAGGGCGCTTTAACGTTGTACCAGACAAGGCCAACTACCAAGGTCTCC  
TCTATGAACAGGTTTGTAAACGGTCTCAAAGAAGCTGGTTATGATTACCAAAACCACTGAACAAACCGTAACGGTTCTCGGAGT  
GCCAAAGCATGCTAAGGATGCTAGTCAAGGTATCAATGCTGTATCCGACTAGCTACCATTTCTTGTCTCTCTCCAAGAACACC  
CTGCTCTCAGTTTTCTTGCAACACAAGCAGGTCAAGACGGCACAGGAAGACAATCTTTGGTGTATAGCAGATGAACCTTC  
TGGTCACTATCCTTTAATGTCCGAGGTCTCATGATCAATCATGAACGTTCTGAAATCCGATTGACATTCCGACTCCTGTCTT  
AGCTGACAAGGAAGAAGTATAGTAGAGTTGCTTACAAGATGTGCACAACTACCAACTCCGCTACGAAGAGTTTGACTATCTA  
GCGCCTCTATACGTGCGAGAAGACAGTAAACTCGTTAGCACACTGATGCAAACTACCAAGAAAAGACTGGCGATAACAGTC  
CTGCTATTTCATCCGGTGGTGCCACTTTTGTCTGCAACCATGCCAAATTTGTGTAGCCTTCCGGCGCTTATTTCCAGGAGCGAAG  
CAGACAGAACATCAGGCAAAATGAATGTCCGTTCTAGAAGATTTGTACCGTGCTATGGATATTATGCCGAAGCCGTCTATC  
GACTTGCAACTTAA

4169.1 (SEQ. ID. NO. 287)

ATGTCTAATTCATTGTGCTCAAGTTGTTAGTCTCTCAATTATTTGCAAAATTTAGCAGATATTTTCTTTAGAGTAACAATCATTGCT  
AACATATACATTATTTCAAAATCAGTAATTGCCACATCACTAGTTCTCTATCTTAATAGGAATATCCTCTTTTGTGCGAGTCTT  
TTAGTTCCGTTGGTTACTAAAAGGTTAGCGCTAAATAGGGTTTATCTTTATCTCAATTTGGAAAGACTATATTATTGGCGAT  
ACTGGTAGGAATGTTTACCCTAATGCAATCCGTACGCGCTTTGGTGTACCTATCTATTTGTTGTTGCAATTTTCCATGATG  
GTTTTGCAGCACCCGTTTCTATGCTATTGTGCCACGCTATGCGACCGATTGGGTAAGGCTAATTCAGCCTTATCAATGACT  
GGTGAAGCTGTTCAATTGATAGGTTGGGGATTAGGTGGACTCTTGTGTTGCAACAATTGGTCTGTTACCTACCACGTGTATCAA  
TTTAGTCTTGATATCATTCTAGCTTTCTGATGTTATTTCTTCTAACGCTGAAGTGGAGGTGTTAGAGTCAGAAACTAATCT  
TGAAATTTTGTCTAAAAGGTTGGAAGTTAGTTGCTAGAATCTAGATTAAAGACTTTTGTATCAGCAAAATTTATTGGAAATTT  
TTTCAAAATACGATTTGGGTTTCTTCCATTATACTTGTTTTTGTAACGGAGTTATTAATAAAAACGGAAAGTTACTGGGGATATT  
CTAATACAGCATACTCTATTGGTATTATAATTAGTGGCTTAATTTGCTTTTAGGCTATCTGAAAAGTTTCTTGTGCTAAATGGG  
AACCCCAATTTATCACCCCAATCTAAAAACCATCCAGAATCCTTGGCTTAGCTTAGATCCTGGATGGTTCTTTTTTTCACCCA  
ATGGGTGTTTTTACTAGACAAAAAAGAGTTTCCCTTTATGGTATAAGTGTAGAAAAAACACAAAAAGAAAGGAAACTCA  
CATGAACAGTTTACCAATCATCACTTCCAAAAACAAGTCTTTTTACCAACTATCTTTCGATGGAGGTCAATTAACCCAGTATG  
GTGGTCTTATCTTTTTTTCAGGAACTTTTTCCAGTTGAAACTAAAAGAGCGGATTTCTAAGTATTTAGTAACGAATGACCAA  
CGCCGCTACTGCTGTTATTCGGATTACAGATATCCTTGTCCAGTTCCTCTTCAACTGTTAAACAGGTTATGGAACGGACTATGCT  
TGTAAGAATTGTGCTGATGCCTACTT  
TCCAAAAATTTGTTGGAAGGAGGGCAGCTTGCTTCACAGCCAACCTTATCCCGTTTTCTTTCCAGAACTGACGAGGAAACAGTCC  
ATAGTTTGGCATGCCTCAACCTTGAATTTGGTTCGAATTTTACAGTTTACCAGCTAAACCACTCATTTGATGATATCGATT  
CTACCCATTTCAACAATTTATGGCAAGCAAGAAGGTTGCTTATAACGCCCACTATCGTGCTCATGGCTATCATCTCTTTAT  
GCTTTCGAGGGGAAGACAGGTTATTGTTTCAATGCCAGCTTCGTCTGGTAATCGTTATTGTTCTGAAGAGGCAGACAGCTT  
TATCACACCTGTTTGAAGACGGTTTAAATCAACTTCTCTTTCGAATGGATAGTGGCTTTGCGACCCCAAAATATACGATTAAAT  
TGAAAAAACAGGGCAATACTACCTCAAAAAACCAAGAAATACTGTCTGAGCCGCTTGGAGACCTTCCCTCCCTTGC  
CCACAGGATGAGGACTTAACCATCTTGGCCCACTCCGCTACTCAGAACTCTCTATCAAGCAGGATCTTGGTTCGACAAGC  
GTCGTGTCTGCCAGTTCTCTGAACGAAAAGAAGGAAACTTGTCTACGATGTTATTTCTCTCGTTACAAATATGACGAGTGGGA  
ACAAGCCAAGACAGTTTACGCTTTATCGTGGACGTGGTCAAGCCGAGAATTTATCAAGGAGATGAAGGAGATTTTTTG  
GCGATAAAACCGGATTTTCAACCTTAAACAAACGAATACTGTATGATGAGCTGTATCGCCTACAATCTCTATCTTTTT  
CTCAACATCTAGCTGGAGGTGACTTCCAACTTAAACAATCAACGCTTCCGCCATCTTTTTCTTACGTGGTGGGAAATG



TGTTGCAACAGGACGCAAGCAGCTCCTCAAATTGTCTAGTCTCTATGCCTATTCCGAATTGTTTTCAGCACTTTATTCTAGGAT  
TAGAAAAAGTCAACCTGAATCTTCTGTTCCTTATGAACCACCTAGAAGAAAAGCGTCGTTAATGATGCATTAA

4169.3 (SEQ. ID. NO. 288)

ATGATGGAGTTTTTCAACAGCTTCCTCATTTAGAGCCATATGGCAATCCTCAGTATTTTGTGTTATGTGATTGCTGCAACCTTG  
CCCATCTTTATAGGTCTCTTTTCAAGAAACGCTTTGCCTGGTATGAAGTGTGGTAAGTCTCTTCTTTATTGTACCATGTTG  
GTGGGTGGAAAGACCAATCAACTAGCTGCCTTGGGTATTTACCTTTGTCTGGGAAATATTGCTCCTGCTTTTCTACAAAGCATTA  
TCGAAAAAGCAAGGATGGCAAGTGGGTCTTCTAGTTAGTTTCTGTCCCTACTTCCGATTATCTTTGTCAAGGTGCAAC  
CAGCTATCAATGGAACGCAGTCTTTGGCTTGGGTCTTGGGAATTTCTTACCTGACCTTTCGTTCCGGTTGGAATTTGTCATCGAGC  
TGAGAGATGGAGTGATTAAGGATTTTACCCTCTGGGAATTCCTCCGTTTCTCTTCTCATGCCAATTTCTCGAGTGGTCCAA  
TCGATCGCTTTAAGCGATTTAATGAAAAATTATCAGGCTATTCTGAGCGAGATGAGTTGATGGATATGCTGGATGAATCTGTC  
CGCTATATCATGTGGGGCTTTTGTATAAGTTTATCCTAGCTCATGTTTATAGGAGAGACCTTACTACCTCCTCTGAAGAATTTA  
GCCTTGCACTCAGGTGGCTTCTTTAATCTCTATGCCTTGGCAGTTATGTATACTTTTGGTCTGGAACCTTCTTTTGACTTTGCA  
GGTTATTCTATGTTTGGCTTTGGCCATCTCAAACCTTGATGGGAATCCGTAGCCCTATCAACTTTAACAAGCCCTTTTATCAAGG  
GATTTAAAGGAGTTTTGGAATCGCTGGCATATGAGTCTGCTCTGTTTCCGTGACTTTGTCTTTATGCGAATGGTGATGGT  
GTTAACCAAGAAAAGTCTTTAAAAATCGTAATGTAACCTCAAGCATGGCCTACATTGTAATATGCTGATTATGGGATTTT  
GGCATGGTGTGACCTGGTACTATATCGCCTATGGACTCTTTCATGGACTAGGCTTGGTCATCAATGATGCCTGGGTTCCGAAG  
AAAAAAACGCTCAATAAGGAACGGAAAAAAGCAGGGAAGGCTGCCCTACCTGAGAATCGCTGGATTTCAGTTGCTTGGCATG  
GTTGTCACCTTCCATGTTGTCATGTTGTCATTCTTAATCTTTTCTGGATTCTTGAATAATCTATGGTTAAAAAATAA

4169.4 (SEQ. ID. NO. 289)

ATGCTTAAACGCTTATGGATGATCTTCGGACCGGTCTTGATCGCTGGTTTGTGGTTTTCTGCTCATTTCTTTTATCCTACTG  
AGATGCATCAATCTAGGAGCTGAAAAGCGTTACAGCAGTGGCTACTACTATCGATAGTTTAAAGGAGCGAAGTCAAAAAAGT  
CAGAGCACTATCTGATCCAAATGTGCGTTTTGTTCCTTCTTTGGCTCTAGTGAATGGCTTCGTTTTGACGGTGCTCATCCTGC  
GGTATTAGCTGAGAAATACAATCGTTCCTACCGTCTTATCTTTAGGACAGGGGGAGCTGCATCGCTTAACCAATATTTTG  
GAATGCAACAGATGTTTACCACAGCTGGGAATAAACAAGTTGTGTATCTCACCTCAGTGGTTTCAGTAAAAATGGCTA  
TGATCCAGCAGCTTCCAGCAGTATTTTAATGGAGACAGTTGACTAGTTTCTGAAACATCAATCTGGGGATCAGGCTAGTC  
AATATGACGCGACTCGCTTACTGCAACAGTTCCTCAACAGTAGCTATGAAGGACCTGGTTCAGAAGTTGGCAAGTAAAGAAGA  
ATTGTCGACAGCAGACAATGAATGATTGAATTTATGGCTCGTTTAAATGAACGCCAAGCTTCTTTTGGTTCAGTTTTCGG  
TTAGAGCGCTATGTTAACTACGATAAGCATGTAGCTAAGTATTTAAAAATCTTGCCAGACCAAGTTTTCAGTAAAAATGAGAA  
GATGTTGTCAAAGCAGATGCTGAAAAAAATACTTCCAATAATGAGATGGGAATGAAAAATTATTTCTATAATGAGCAGATCA  
AGAAGGATTTGAAGAAATTAAGGATTCTCAGAAAAGCTTTACCTATCTCAAGTCGCCAGAGTATAATGACTTGCAGTTGGT  
TTTAAACAGTTTTCTAAATCTAAGGTAAACCGGATTTTATCATTCCACCTGTTAATAAAAAATGGAATGAATGACTGGTC  
TACGAGAGGATGTACCAACAAACCGGTGCAGAAAGATTGCGTAAGAAATTTTGACTTACAAGAAAGGCAATCGTGGCGTGGT  
TTCTAAGGACGGCGGGGAGCCTTTCTTTAAGGACACCATTCACCTTGGTTGGTTGGGTTGGTTGGCTTTTGACAAGGCAG  
TTGATCCTTTCTATCCAATCCACACCAAGCTCCGACTTACCATCTGAATGAGCGCTTTTTCAGCAAAGATTGGGCGACTTAT  
GATGGAGATGTCAAAGAATTTCATAG

4169.6 (SEQ. ID. NO. 290)

ATGGAGAAAAACCTCAAGGCTTTGAAACAAACAACAGACCAAGAAGGCCAGCAATTGAACCTGAAAAGGCAGAGGATAC  
CAAGACAGTCCAAAAATGGTTACTTCGAGGATGCAGCTGTCAAGGACCGCACCTTGAGTGACTATGCAGGTAACCTGGCAATCA  
GTTTATCCTTTCTTGAAGACGGCAGCTTTGACCAAGTCTTTGACTACAAGGCTAAGTTGACTGGTAAGATGACCCAGGCTGA  
GTACAAGGCTTACTATACAAAAGGCTATCATACAGATGTGACTAAGATTAACATTACTGATAATACTATGGAATTTGTTCAA  
GGTGGACAAAGCAAGAAATACACTTACAAGTATGTCGGTAAGAAATTTTGACTTACAAGAAAGGCAATCGTGGCGTGGT  
TTCTCTTTTGAAGCCACAGATGCTGACGCTGGACAATTCAAGTATGTTTCAGTTTATGAGCACAATGTTGCCCCAGTTAAGGC  
AGAACATTTCCATATCTTCTTTGGAGGCACAAGCCAAGAAGCCCTCTTTGAAGAAATGGACAACCTGGCCAACCTACTACCCA  
GATAACCTATCTGGCCAAGAAATCGCCCAAGAAATGTTGGCGCATTGA

4170.3 (SEQ. ID. NO. 291)

ATGAAAGATGGTCAATTGCTAGCCCATCATATTCGTTTGTGAATGGGCGGATTTTTCAAAAGTTACTGAGTCAAGATCCTGA  
GGCTCTTTATAGGGGTGAACAGGGCAAGATTTTAGCGGTTTTATGGAATAGTGAACCTGGCTGCGCAACTGCGACAGATATC  
GCGCTTGGGACTGGACTTGGCAATAATACGCTGACGACTATGATAAAAAAGCTAGAGGAACAAAAGCTTGAATTGTTAGTC  
CGTGTGGAAGACAAAGCGTAAGAAGTATTTAGTTTTAACGGAGTTAGGCAAGTCCCAGAAAGAAAGTGGGGCATCGTGTCA  
GTCAGAAATTGGATACTATCTTTTACAAAGGATTTTCAGAGGAAGAAATTCACCAATTTGAAGGTTTTCAAGAAAGAAATTT  
GGCGAATCTGAAAGAGAAGGGAATGAGGTTTAG

4170.4 (SEQ. ID. NO. 292)

ATGACTAATTTAATTGCAACTTTTACAGGATCGTTTTAGTGATTGGTTGACAGCTCTATCTCAACATTTGCAGTTGTGCTTTTG  
ACCTTGTTACTAGCTATTTTGTCTGCGATTCCCTTGGCTGTTTTCTTCGCTATCATGAGAAGCTGGCCGACTGGGTCTTGCGAG  
ATTGCAAGTATTTTCCAGACCATCCCGTCTCTGGCCTTGTGGGGCTCTTTATCCCTTTGATGGGAATTTGGGACCTTGCCGGCT  
TTGACAGCTCTAGTGATTTATGCGATTTTCCCTATTTTGCAAAATACTATCACTGGGCTGAAGGGAATTTGATCCGAACCTGCA  
AGAGGCTGGGATTTGCTTTGGGATGACCAAGATGGGAACGCTCTCAAGAAATTTGAAATTTCCACTGCCATGCCTGTTATCATG  
TCTGGGATTCGGACGGCAGCTGTTTTGATTATCGGTACGGCAACCTTGGCGGCTTGTATTGGTGCAGGGGACTAGGTTCCCT  
TATCTTTTGGGAAATTGACCGTAATAATGCCAGTTTGATTTGATTGGGGCACTTTCTTCTGCACTGCTAGCCATTGCCTTAA  
CTTCTACTAAAAAGTATGGAAGAAAGCAAAATACAGGATTTTCTCAGGTTTTGCTTGGTGGCTTTTACTGGCTCTGT  
CTTATAGTCCAGCTCTTTTGGTTCAAAAAAGGAAGGAAACCTTGGTTATTGCTGGGAAAAATAGGTCCAGAACAGAAATTTT  
GGCCAATATGTATAAGTTGCTGATTGAAGAAAATACCAGCATGACTGCGACTGTTAAACCGAATTTTGGGAAGACAAGCTTC  
CTTTATGAAGCTCTGAAAAAAGGGGATATTGACATCTATCCTGAATTTACTGGTACGGTGACTGAAAGTTTGGCTTCAACCATC  
ACCCAAGGTGAGTCATGAACAGAAACAGGTTTATCAGGTGGCGCGGTGATGGCATTGCTAAGCAGGATCATCTAGCCTATCTC  
AAACCCATGTCTTATCAAAACACCTATGCTGTAGCTGTTCCGAAAAAGATTGCTCAAGAATATGGCTTGAAGACCATTTTCAG  
ACTTGAAAAAAGTGAAGGGCAGTTGAAGGCAGGTTTACACTCGAGTTTAAACGACCGTGAAGATGGAATAAGGGCTTGC  
AATCAATGTATGGTCTCAATCTCAATGTAGCGACCATTTGAGCCAGCCCTTCGCTATCAGGCTATTTCAGTCAAGGATTTCA  
ATCAGGATGCCTATTCGACTGATGCGGAATTGGAGCGTTATGATTTACAGGTTCTGGAAAGATGACAAGCAAGCTTCCAC  
CTTATCAAGGGGCTCCACTCATGAAAGAAGCTTCTCAAGAAACACCCAGAGTTGGAAGAGTTCTTAATACATTGGCTGG



TAAGATTACAGAAAGCCAGATGAGCCAGCTCAACTACCAAGTCGGTGTGAAGGCAAGTCAGCAAAGCAAGTAGCCAAGGA  
GTTTCTCCAAGAACAAGGTTTGTGAAGAAATGA

4170.5 (SEQ. ID. NO. 293)

ATGATGCATACTTATTTGCAAAAAGAAAATTGAAAAATATCAAAAACAACCCTAGGTGAAATGTCAGGTGGTTACCGTCGTATGG  
TTGCGGCTATGGCTGATTTAGGATTTTCAGGAACTATGAAGGCTATCTGGGATGACCTCTTTGCCCATCGTAGTTTTGCCCAG  
TGGATTTATTTGCTGGTTTTAGGAAGTTTTCTCTCTGGCTGGAGTTGGTTTTACGAACATCGTATTGTTGACTGGATTGGGATG  
ATTTGTAGCTTGACAGGGATTATCTGTGTAATCTTTGTATCGGAAGGTCGAGCAAGTAATTATCTTTTTGGCTTGATTAACCTCT  
GTTATTTACCTTATTTTGGCCCTACAGAAAGGCTTTTATGGTGAGGTGCTGACGACACTTTACTTCACAGTCATGCAGCCAAT  
TGGACTTCTAGTTTGGATTTATCAGGCACAGTTTAAAGAAGGAAAAGCAGGAGTTTGTGCGCGGTAAACTGGACGGCAAGGGC  
TGGACAAAGTATCTTTCCATTAGTGTGCTTTGGTGGTTGGCCTTTGGCTTCATTTATCAGTCTATTGGTGCCAATCGTCCTAT  
CGTGATTCAATCAGATGCAACCAATGGGGTAGGGCAATCTCATGACAGCTGTTTACCCTGAACAGTGGATATCTGGG  
CGGCTACCAATGTCTTTTCAATCTATCTCTGGTGGGGAGAAAGCCTGCAAATTCAGGGAAATATCTAATTTATCTCATTAAAC  
AGTCTAGTTGGTGGTATCAATGGAGCAAGGCAGCTAAGCAGAATACTGATTACTTAACTAG

4170.6 (SEQ. ID. NO. 294)

ATGAGAAATATGAAGGCAAAATATGCTGTTTGGGTGGCTTTTTTCTTAAATTTGACTTATGCCATTGTTGAGTTTATTGCAGG  
TGGAGTATTTGGTCTAGCGCTGTTCTTGCTGACTCTGTGCATGACTTGGGAGATGCGATTGCAATTGGAATATCAGCTTTTCT  
AGAAACAATCTCCAATCGTGAAGAAGACAATCAGTACACCTTGGGCTATAAGCGGTTTAGCCTGCTAGGAGCCTTTGGTAACA  
GCTGTGATTCTCGTAACGGGCTCTGTTCTAGTCAATTTTGGAAAATGTCACGAAGATTTTGCATCCGCAACCAGTCAATGATGA  
GGGGATTCTCTGGTTAGGAATTATTGCGATTACTATCAATCTGTTAGCGAGTCTGGTGGTTGGTAAAGGAAAAGACAAAGAAT  
GAGTCTATTCTGAGTCTGCATTTTCTGGAAGATACGCTAGGTGGGTAGCTGTTATCCTGATGGCGATTGTTCTTCGATTAC  
GGAGTGTATATCCTAGATCCTCTTTTGTCCCTTGTCAATTTCTTTTATTTCTTTTCAAAAGCCCTTCCACGTTTTTGGTCTACA  
CTCAAGATTTTCTTGGATGCTGTGCCAGAAGGCTTTGATATCAAGCAAGTAAAGAGTGGCCTGGAGCGATTGGACAATGTGG  
CCAGCCTTAATCAGCTTAATCTCTGGACTATGGATGCTTTGGAAAAAATGCCATTGTCCATGTTTGTCTAAAAGAAATGGAA  
CATATGGAACCTGTAAAGAGTCTATTGCAATTTTCTTAAAGATTGGTGGTTTTCAAAATATTACCATTTGAAATTGATGCTGA  
CTAGAAACTCACCAACCCTAAGCGAAAAGGTGTGTGACTTGAACGGAGTTATGAGCATCAACATTAG

4170.8 (SEQ. ID. NO. 295)

ATGATTGAATACAAAAATGTAGCACTGCGCTACACAGAAAAGGATGTCTTGAGAGATGTCAACTACAGATTGAGGATGGG  
GAATTTATGGTTTTAGTAGGGCCTTCTGGGTCAAGTAAGACGACCATGCTCAAGATGATTAAACCGTCTTTTGGAAACCAACTGA  
TGGAAATATTTATATGGATGGGAAGCGCATCAAAGACTATGATGAGCGTGAACCTTCGTCTTTCTACTGGTTATGTTTTACAGG  
CTATTGCTCTTTTCCAAATCTAACAGTTGCGGAAAATATTGCTCTCATTTCTGAAATGAAGGGTGGAGCAAGGAAGAAAT  
ACGAAGAAAACAGAAAGAGCTTTTGGCTAAGGTTGGTTTACCAGTAGCCGAGTATGGGCATCGCTTACCTAGTGAATTATCTG  
GTGGAGAACAGCAACGGGTCGGTATTGTCCGAGCTATGATTGGTCAGCCCAAGATTTTCCCTATGGATGAACCCCTTTTCGGCC  
TTGGATGCTATTTTCGAGAAAAACAGTTGCAGGTTCTGACAAAAGAAATTGCATAAAGAGTTTGGGATGACAACGATTTTGTAA  
CCCATGATACGGATGAAGCCTTGAAGTTGGCGGACCGTATTGCTGTCTGACAGGATGGAGAAAATTCGCCAGGTAGCGAATCC  
CGAGACAATTTTAAAAGCGCCTGCAACAGACTTTGTAGCAGACTTGTTTGGAGGTAGTGTTCATGACTAA

4171.1 (SEQ. ID. NO. 296)

ATGTCAGCAGTTGCTATTTTACGCTATGACCAAGGTTATGCAAGAAACCCACGGAAATCCTTCTAGTATTCATGGTCATGGTCCG  
TCAAGCTGGCAAACTCTTTCGAGAGAAGCCCGTCAGGAACTAGCCAGTTACTAAGGACAAAACCTCAACATATCTTTTTCACT  
TCTGGTGGGACTGAAGGCAATAATACTACCATCATTGGCTACTGTCTTCGTCACCAAGAACAAAGGAAAAACATATCATCACAA  
CTGCCATCGAGCACCATTGCTGCTTGGAAACAATTGATTACTTGGTTCAACACTTTGGGTTTGAAGCAACCATATCCAGCCA  
GAAAATCAAGAAATCACAGCCAGCAAAATTCAAAAGGCTTTACGTGACGATACGATTTTGGTTTCTACCATGTTTGTCAATA  
ATGAGACAGGAAACCTACTGCCCATCGCTGAAATTGGCCAAATACTCAAGCAACACCCTGCTGCCTATCATGTTGATGCACT  
TCAGGCTATTGGTAAATCCCAATTCATTGAGAAGAAATTGGGCATTGATTTTCTCACTGCTTTCGCCCAAAATTCATGGTCT  
CTAAGGGAAATCGGTTTTCTCTACGCATCTAGCATGGACTTGGATTTCTTATCTACATGGCGGAGACAGGAACAGAAAAACG  
TGCAGGAACTGAAAATCTGCCTGCCATTGTAGGCATGGTTGCAGCCCTAAAAGAAGACCTAGAAAAACAAGAAGAACATTT  
TCAACATGTACAAAATCTAGAACTGCCTTTCTGGCAGAGCTGGAGGGCATTCACTATTACCTGAATAGAGGAAAAACATCAT  
TCCCTTATGTTCTCAATTTGGATTTCCTGGTCAAGAAAATGCACTTCTACTCCTTCGGCTAGATTTAGCTGGAATTTCAATC  
TCTACTGGCTCAGCCTGTACTGCAGGCGTTGTCCAATCCAGCCATGTTCTTGAAGCCATGTATGGCGCAAAATTCAGAACGCTT  
GAAGGAATCCCTTCGCATCAGTTTGTCCGCCAAAAATACCGTTGAAGACCTACAAACCCTCGCAAAAACCTTAAAAGAAATT  
ATCGGAGGTTAG

4172.1 (SEQ. ID. NO. 297)

ATGTTATTCAAATTATCTAAGGAAAAAATAGAGCTAGGCTTATCTCGTTTATCGCCAGCCCGTCGTATTTTTTGGAGTTTGGC  
TTGGTCATTTTACTAGGCTCTCTCTTTTGGAGCTTGCCCTTTGTCCAAGTTGAAAGCTCACGAGCGACTTATTTTGATCATCTTT  
TCACTGCTGTCTCTGCAGTCTGTGTGACGGGTCTCTCAACCCTTCCAGTAGCTCACACCTATAATATCTGGGGTCAAAATAATC  
TGTTTGCTCTTGATTACAGATCGGTGGTCTAGGGCTCATGACCTTTATTGGGGTTTTCTATATCCAGAGCAAGCAAAAGCTTAG  
TCTTCGTAGCCCGTGAACATTCAGGATAGTTTATGTTATGGAGAACTCGATCTTTGAGAAAGTTTGCTATTCTATTTTCTT  
CAGGACCTTTTTGGTTGAGAGCTTGGGAGCTATTGTTTCTAGTTTTCGCTTATTCCTCAACTTGGCTACGTTGCTGCTTTT  
TAGTTCCATTTTCTAGCGATCTCAGCCTTCTGTAATGCCGGTTTTGATAATTTAGGGAGCACCAAGTTTATTGCTTTTCAGAC  
CGATTTACTGGTCAATCTGGTGATTGCAGGCTTGATTATTACAGCGGCGCTTGGTTTTATGGTCTGGTTTGATTGGCTGGTCA  
TGTAGGAAGAAAGAAAAAGGACGCTCTGCACTTTCTATACGAAGCTTGTACTATTATTGACTATAGGTTTGTGTTATTGGAA  
CAGCACTACTCTCTTTCTTGAGTGGAAACAATGCTGGAACGATTGGCAATCTCCCTGTGCGGATAAGGTTTATGTTAGCTTT  
TTTCAAAACAGTGACGATGCGAACAGCTGGCTTTTCTACGATAGATTATACTCAGGCTCATCCTGTGACTCTTTTGATTATATC  
TTACAGATGTTTCTAGGTGGGGCAGCTGGAGGAACAGCTGGGGGACTCAAGATTACGACATTTTTTGTCTCTTGGCTTTTGC  
ACGAAGTGAGCTTCTAGGCTTGCCCTCATGCCAATGTTGCGAGACGAACGATCGCGCGGCAACGGTTCAAAAATCCTTTAGT  
GTCTTTATTATCTTTTGTAGGCTTCTTGATAGGATTGATTCTGCTAGGGATAACAGCCAAAGGCAATCCTCCCTTTATCCAC  
CTCGTATTTGAAACCATTTCAGCTCTTAGTACAGTTGGTGTAAACGGCAATCTGACTCCTGACCTTGGGAAATTTGGCTCTCAG  
TGTTATCATGCCACTTATGTTTATGGG

ACGAATTGGTCCCTTGACCTTGTGTTAGCTTGGCAGATTACCATCCAGAAAAGAAAGATATGATTCACTATATGAAAGCA  
GATATTAGTATTGGTTAA

4172.2 (SEQ. ID. NO. 298)

ATGTCAGATCGTACGATTGGAATTTTGGGCTTGGGAATTTTGGGAGCAGTGTCTAGCTGCCCTAGCCAAGCAGGATATGA  
ATATTATCGCTATTGATGACCACGCAGAGCGCATCAATCAGTTTGGCCAGTTTGGCGCGTGGAGTGATTGGTGACATCAC  
AGATGAAGAATTATTGAGATCAGCAGGGATTGATACCTGCGATACCGTTGTAGTCGCGACAGGTGAAAACTGGAGTCGAGT  
GTGGCTTGGCGTTATGCACTGTAAGAGTTTGGGGGTACCGAGTGTATTGCTAAGGTCAAAAGTCAGACCCGCTAAGAAAGTGC  
TAGAAAAGATTGGAGCTGACTCGGTTATCTCGCCAGAGTATGAAATGGGGCAGTCTCTAGCACAGACCATTTCTTTCCATAA  
TAGTGTGATGTCTTTCAGTTGGATAAAAAATGTGTCTATCGTGGAGATGAAAAATTCCTCAGTCTTGGGCAGGTCAAAGTCTGA  
GTAAATTAGACCTCCGTGGCAAATACAATCTGAATATTTGGGTTTCCGAGAGCAGGAAAAATCCCCATTGGATGTTGAATTT  
GGACCAGATGACCTCTTGAAAGCAGATACCTATATTTGGCAGTCATCAACAACCAAGTATTGGATACCCCTAGTAGCATTGA  
ATTCGTAA

4172.3 (SEQ. ID. NO. 299)

ATGAAGTTATTGTCTATCGCAATTTCTAGCTATAATGCAGCAGCCTATCTTCATTACTGTGTGGAGTCGCTAGTGATTGGTGG  
TGAGCAAGTTGGGATTTTGATTATCAATGACGGGTCTCAGGATCAGACTCAGGAAATCGCTGAGTGTGTTAGCTAGCAAGTAT  
CCTAATATCGTTAGAGCCATCTATCAGGAAAAATAAATGCCATGGCGGTGCGGTCAATCGTGGCTTGGTAGAGGCTTCTGGGC  
GCTATTTTAAAGTAGTTGACAGTGATGACTGGGTGGATCCTCGTGCCTACTTGAAAAATCTTGAAACCTTGCAAGAACTTGAG  
AGCAAAGGTCAAGAGGTGGATGTCTTTGTGACCAATTTTGTCTATGAAAAGGAAGGGCAGTCTCGTAAGAAGAGTATGAGTT  
ACGATTCAGTCTTGCTGTTCGGCAGATTTTGGCTGGGACCAAGTTCGGAAATTTCTCAAAGGCCAGTATACCATGATGCAC  
TCGCTGATTTATCGGACAGATTTGTTGCGTGCTAGCCAGTTCTAA

4172.4 (SEQ. ID. NO. 300)

ATGAAATTCATCCAAATCAAAGATATACTCGTTGGTCTATTCGCCGTCTCAGTGTCCGTGTTGCCTCAGTTGTTGTGGCTAG  
TGGCTCTTTGTCTAGTTGGTACGCCAAGTTCTGTACGTGCCGATGGGCTCAATCCAACCCAGGTCAAGTCTTACCTGAAG  
AGACATCGGGAAGCAAAAGAGGGTGACTTATCAGAAAAACCAGGAGACACCGTTCTCACTCAAGCGAAAACCTGAGGGCGTTA  
CTGGAATACGAATTCACTTCCGACACCTACAGAAAGAACTGAAGTGAGCGAGGAAACAAGCCCTTCTAGTCTGGATACACT  
TTTTGAAAAAGATGAAGAAGCTCAAAAAATCCAGAGCTAACAGATGTCTTAAAAGAACTGTAGATACAGCTGATGTGGA  
TGGGACACAAAGCAAGTCCAGCAGAACTCTCTGTAACCAAGTGAAGGTGGAGTGAAGAAAAATACAAAACCTTGCAAGAACTCG  
ATGTTCTGTCTGCTTATCTTGAAAAAGCTGAAGGGAAGGTCTTTCACTGCCGTGTAAACCAAGTAATTCCTTATGAACATA  
TTCCGTGGTGATGGTATGTTAACTCGTCTATTACTAAAGCTTCGGATAATGTCCTTGGTCTGACAATGGTACTGTCTAAAAA  
TCCTGCTTTACCTCTCTGAAGGATTAACAAAAGGGAATACTTCTATGAAGTAGACTTAAATGGCAACATCTGTTGGTAAAC  
AAGGTCAAGCTTTAATTGATCAAACTTCGCGCTAATGGTACTCAAACCTTATAAAGCTACTGTTAAAGTTTACGGAAAAATAAGA  
CGGTAAAGCTGACTTGACTAATCTAGTTGCTACTAAAAATGTAGACATCAACATCAATGGATTAGTTGCTAAAGAAACAGTT  
CAAAAAGCCGTTGCAGACAACGTTAAAGACAGTATCGATGTTCCAGCAGCCTACCTAGAAAAAGCCAAGGGTGAAGGTCCA  
TTACACGACAGGTGTCAACCATGTGATTCCATACGAACCTCTTCGAGGTGATGGCATGTTGACTCGTCTCTGCTCAAGGCATC  
TGACAAGGCACCATGGTCAGATAACGGCGCAGCTAAAAACCCAGCCCTATCTCCACTAGGCGAAAAACGTGAAGACCAAAGG  
TCAATACTTCTATCAAGTAGCCTTGGACGGAATGTAGTGGCAAGAAAAACAAGCGCTCATTGACCAGTTCCGAGCAAAAT  
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CGATGTTCCAGCAGCCTACCTAGAAAAAGCCAAGGGTGAAGGTCCATTACAGCAGGTGTCAACCATGTGATTCCATACGAA  
CTCTTCGCGAGGTGATGGTATGTTGACTCGTCTCTTGTCTCAAGGCATCTGACAAGGCACCATGGTCAGATAACGGTGACGCTAA  
AAACCCAGCCCTATCTCCACTAGGTGAAAACGTGAAGACCAAAGGTCAATACTTCTATCAATTAGCCTTGGACGGAATGTA  
GCTGGCAAGAAAAACAAGCGCTCATTGACCAGTTCCGAGCAAACGGTACTCAAACCTTACAGCGCTACAGTCAATGTCTATG  
GTAACAAAGACCGTAAACCAAGACTTGGACAACATCGTAGCAACTAAAAAAGTCACTATTAACATAAACCGGTTAATTTCTAA  
AGAAACAGTTCAAAAAGCCGTTGCAGACAACGTTAAGACAGTATCGATGTTCCAGCAGCCTACCTAG

4172.5 (SEQ. ID. NO. 301)

ATGAAACTAAAAAGTTATATTTTGGTTGGATATATTAATTTCAACCCCTCTTAACCATTTTGGTTGTTTTTGGGCTGTTCAAAAA  
ATGCTGATTGGCAAGGCGAGATTTACTTTTGTCTGGGATGACCATCGTTGCCAGCCTTGTGCGGTGCTGGGATTAGTCTCTT  
TCTCCTATTGCCAGTCTTTACGTCGTTGGGCAAACTCAAGGAGCATGCCAAGCGGGTAGCGGCCAAGGATTTTCTTCAAATT  
TGGAGGTTCAAGGTCCTGTAGAAATTTAGCAATTAAGGCAAACTTTTAAATGAGATGTCCCATGATTGTCAGGTAAGCTTTGAT  
TCCTTGAAGAAAGCGAAGGAGAAAAAGGGCTTGATGATTGCCAGTTGTCGCATGATATTAAGACTCTTCACTTCGATCC  
AAGCGACGGTAGAAGGGATTTTGGATGGGATTATCAAGGAGTCGGAGCAAGCTCATTATCTAGCAACCATTTGGACGCCAGA  
CGGAGAGGCTCAATAAAGTGGTTGAGGAGTTGAATTTTTGACCCTAAACACAGCTAGAAATCAGGTGGAAACTACCAAGTAA  
AGACAGTATTTTCTGGACAAGCTCTTAATTGAGTGCATGAGTGAATTTTCACTTTTGTATTGAGCAGGAGAGAAGAGATGTCC  
ACTTGCAGGTAATCCAGAGTCTGCCCGGATTGAGGAGATTATGCTAAGCTTTCTCGTATCTTGGTGAATCTGGTCGATAAC  
GCTTTTAAATATTCTGCTCCAGGAACCAAGCTGGAAGTGGTGGCTAAGCTGGAGAAGGACCAGCTTTCAATCAGTGTGACCG  
ATGAAGGGCAGGGATTGCCCCAGAGGATTGGAAAAATATTTCAAACGCCTTATCGTGTGCAAACTTCGCGTAACATGAA  
GACAGGTGGTCATGGATTAGGACTTGGCATTGCGCGTGAATTTGGCCCATCAATTGGGTGGGAAATCACAGTCAGCAGCCAG  
TACGGTCTAGGAAGTACCTTTACCCTCGTTCTCAACCTCTCTGGTATGAGAAAAATAAAGCCTAA

4172.6 (SEQ. ID. NO. 302)

ATGTTTGGTCAAACGGCTCAACATGGTCTTACGAATAGCCTGAAAGACTTCTGGATTTTCTGCTGAATATAGGTCCACAATT  
GGCGTTTTTTTGGCAGATGCTCCGCTGTTCCAGATCGGTTGAGCAGGGTACTGGAAATCACCGTCGTGAGTTCAATATGATTC  
AGCAGATATTTCTCGCATTTTGGGATGACTCACTTGGGACAAATCAAGTTGGTCTATCAAGAGTCGATTGACCTTGAGTTGCTG  
GTCAATGCACCTTAATCATCACTTGTCTATTGACAGACTGGTCTCAGCCCCAATCAAATAACGATAGAAATCGACAGGCGAGA  
TAGATCATGGTCTTGACCTGTAAGGGGCGTAAAGACAAAGAGATTATCGACATAAAAAAGTATGTTGAGGAGTTAGAACT  
GGCTAGCACGCAACAAATCTGTCCGATAAATCAGCGAGTGCATCATGGTATACTGGCCTTTGGAGAAATTTCCGACCTGGTC  
CCAGCCAAAAATCTGCCGAACAGGCAAGACTGA

4174.1 (SEQ. ID. NO. 303)

ATGGAACATTTAGCAACTTATTTTCAACCTATGGAGGAGCTTTCTTCGCTGCATTGGGAATTGTATTGGCGGTTGGATTAAAG  
CGGTATGGGGTCTGCTTATGGAGTTGGTAAGGCTGGGCAATCTGCCGAGCTTTACTGAAAGAACAGCCTGAAAAAGTTTGCC

TCAGCTTTGATATTGCAATTATTGCCCGGAACACAAGGATTATATGGTTTTGTTATTGGAATTTTAATTTGGTTGCAATTAAC  
CCAGAACTTCCTTTAGAAAAAGGCGTTGCTTATTTCTTTGTAGCTCTTCCAATTGCTATTGTAGGATACTTTTCAGCTAAGCAT  
CAAGGAAATGTAGCAGTAGCGGGAATGCAAATCTTGGCTAAAAGACCAAAAGAAATTCATGAAGGGAGCAATTTTAGCTGCC  
ATGGTAGAAACCTATGCAATTTCTTGCTTTTGTCTATCATTCTTTGACCTTCGTGTATAA

4175.2 (SEQ. ID. NO. 304)

ATGTTAAAAACAGAAAAACAATCACGTTATCAAATGTTAAATGAAGAATTGTCCTTCCTATTGGAAGGCGAAACCAATGTTT  
TGGCTAATCTTTCCAACGCCAGTGGCTCTATAAAATCACGTTTTCCTAATACCGTATTGTCAGGCTTTTATTTGTTGCGATGGAA  
AGGAATTGGTTTTAGCCCCCTTCCAAGGAGGTGTTTCTCGCATCCGTATTGCACTAGGCAAGGGTGTGTTGGTGAGGCAGCT  
CACTTTCAGGAACTGTTATTGTTGGAGATGTGACGACCTATCTCAACTATATTTCTTGTGATAGTCTAGCTAAAAAGTGAAAT  
TGTGGTGCCGATGATGAAGAATGGTCAGTTACTTGGAGTTCTGGATCTGGATTCTTCAGAGATTGAGGATTACGATGCTATGG  
ATCGAGATTATTTGGAACAATTTGTGCTATTTTGTCTGAAAAGACAGCATGGGACTTTACGATGTTTGAGGAAAAATCTTAA

4175.3 (SEQ. ID. NO. 305)

ATGTCAGTATTAGAGATCAAAGATCTTCACGTTGAGATTGAAGGAAAAAGAAATTTTAAAAGGGGTAAACCTGACCCTGAAAA  
CAGGAGAAATTCGGCTATCATGGGACCAAAATGGTACAGGTAAATCGACTCTTCTGCCGTATCATGGGAAATCCAAACTA  
TGAAGTAACTAAAGGTGAAGTTTTGTTGATGGCGTAAACATCCTTGAGTTGGAAGTGGATGAGCGTGCCGCTATGGGACTT  
TTCTTGTCTATGCAATACCCATCAGAAATCCCTGGAATTACCAATGCTGAGTTTCTTCGTGCCGTATGAATGCGGGTAAAGA  
AGATGATGAGAAGATTTCAAGTTCGTGAGTTTATTACTAAGCTAGATGAAAAAATGGAATTGCTCAACATGAAAGAAGAAATG  
GCAGAGCGTTACCTCAACGAAGGCTTCTCTGGTGGTGAGAAAAACGCAATGAAATTTCTTCAACTTTTGATGTTGGAGCCAA  
CATTTGCTCTTTTGGACGAGATTGACTCAGGTCTTGATATTGACGCTCTTAAAGTTGTGTCTAAAGGTGTCAATGCCATGCGT  
GGTGAAGGTTTTGGTGCTATGATCATCACTCACTACCAACGCTCTTTGAACTATATCACACCTGATGTGGTACACGTTGATGAT  
GGAAGGTCGTGTTGCTCTTCTGGTGCCGAATTTGGTGCGCGTTTGGAAACGTGAAGGATACGCAAAATTAGCTGAAGAA  
CTTGGCTACGACTACAAGGAAGAATTGTAA

4174.4 (SEQ. ID. NO. 306)

ATGCCCTACAAAAGACAAAGGAGTTTTTCAATGGCACTTTCTAAACTAGATAGCCTTTATATGGCAGTGGTAGCAGACCATT  
CGAAAAATCCACATCACCAAGGGAAGTTAGAAGATGCTGAGCAAAATCAGTCTCAACAAATCCGACTTGTGGGGATGTCATCA  
ACCTCTCTGTCAAGTTTGATGCAGAGGACCGTTTGAAGATATTGCTTTTCTAAATTCAGGATGCACGATTCTCAACTGCTTCT  
GCTAGTATGATGACAGATGCCGTTTTAGGAAAAACCAACAAGAAATTTAGAACTGGCGACTATTTTTCTGAAATGGTTT  
AAGGGCAAAAAGATGAGCGTCAAGACCAACTTGGAGACGCGGCATTCTTGTGAGGTGTGCCAAATTCCTCAAAGAATCA  
AGTGTGCAACCCTAGCTTGAATGCCCTTAAGAAAAACAATTGAAAATCAAGAAAAACAGTAA

4175.5 (SEQ. ID. NO. 307)

ATGAAAAATCAAGACCTATTGAGAAAAAGATGTCATGTTGCTAGATTTCGAGGCAACTGAAAAACAGCTGTCATCGACGAGA  
TGATTAATAAATTTGACAGACCACGGTTATGTAACAGATTTTGAACATTTAAAGAAGGAATTTTGGCGCGTGAAGCTTTGAC  
TTCTACTGGTTTGGGTGATGGAATCGCAATGCCTCACAGCAAAAACGCTGCTGTCAAAGAAGCGACAGTTCTATTGTCTAAG  
TCAAATAAGGGTGTTGACTACGAGAGCTTGGATGGACAAGCAACTGACCTCTTCTTCATGATTGCAGCTCCAGAAGGTGCCA  
ATGATACTCACTTGGCAGCCTTGGCAGAAATGTCTCAATCTGATGAAAGACGGTTTGCAGACAACTTCGTCAAGCAAC  
ATCTGCAGACCAAGTTATCGAACTTTTGAACAGCTTCAGAAAAAAGCTGAGGAACCTGTTCAAGCACTGCTAATGACTCT  
GGTGACTTTATCGTAGCTTGTACAGCTTGTACAACAGGTATTGCCACACTTACATGGCCCAAGAAGCCCTTCAAAAAGTAG  
CTGCTGAAATGGGGGTTGGTATCAAGGTCGAAACCAACGGTGCTAGCGGTGTTGGAAATCAACTAACTGCAGAAAGATATCCG  
TAAGGCTAAAGCTATTATCATTCAGCAGACAAAGGCCGTTGAAATGGATCGATTGATGGAAAACCATGATCAATCGTCCA  
GTTGGCTGACGGTATCCGTAAAGACAGAAGAGCTAATTAACCTTGGCTCTTTCAGGAGATACTGAAGTCAACCGTGGCGCTAATG  
GTGCCAAAGCTGCAACAGCCTCTAACGAAAAACAAAGCCTTGGTGGTGCCTTGTACAAACACTTGATGAGTGGTGTATCTCA  
AATGTTACCATTGCTTATCGGTGGTGGTATCATGATTGCCCTTGCCTTCTTGATTGACGGTGCTTTGGGTGTTCCAAATGAAAA  
CCTTGGCAATCTTGGTTCTTACCATGAGTTAGCTTCTATGTTCTGAGAAATTTGGTGGAGCTGCCTTTGGTTTGATGCTCCAGT  
CTTTGGCGGTTATGCTACTCTATTGCTGAAAAACCGGTTTGGTAGCAGGTTTCGTGGCTGGTGCTATTGCCAAAGAAG  
GTTTTGCCTTTGGTAAATTCCTTATGCCCGAGGTGGTGAAGCAACTTCAACTCTGTCAGGTGCTCATCTGGTTTCTAGGTG  
CCCTTGTGGTGGATTATTCGCAAGGTGCCTTGGTCTTGCCATCAAGAAATACGTTAAAGTTCCTCGTTCCTCACTCGAAGGTGCT  
AAATCAATCCTTCTATTGCCACTTCTTGAACAACTTGTACAGGATTGTTATGCTAGCTGGAATATCCCAATGAGGTGCAAT  
CAACACTGCTATGAATGACTTCTAGGCGGTCTTGGAGGAGGTTACGTGTCTTCTTGGTATCGTCTTGGTGAATGATGG  
CTGTTGACATGGGTGGACCAAGTAAATAAAGCAGCTTATGTCTTGGTACAGGTACGCTGCAGCAACTGTTCTTCAAGGTGGT  
TCTGTAGCCATGGCAGCAGTTATGGCTGGAGGAATGGTGCCACCACCTTGCATCTTTTGTGCGCAACTCTTCTTCAAGATAA  
ATTTACTAAGGAAGAAGCACTGCTGTTTGAACAAACATCATATGGGCTTGTCAATTTATCACTGAGGGAGCGATTCCATTTG  
GTGCCGCTGACCCAGCTCGTGCGATTCCAAGCTTCATCCTTGGTTCAGCAGTAGCAGGTGGACTCGTTGGTCTTACTGGTATC  
AAACTCATGGCGCCACACGGAGGAATCTTCGTTATCGCCCTTACTTCAAAATGCTCTCCTTTACCTCGTTTCTGTCTTGGTAGGA  
GCAATCGTAAGTGGTGTGGTTTATGGTTACCTACGCAACCACAAGCATAA

4175.6 (SEQ. ID. NO. 308)

ATGGCAAACAAGAATACAAGTACAACAAGACGGAGACCGTCTAAAGCAGAACTGGAAAGAAAAGAGCGATTCAACGAAT  
GTTGATTTTCGTTAGGAATTCGATTTTATTGATTTTCGAGCCTTCAAATTAGGGGCTGCAGGTATAACCTTTTATAATTTAAT  
TCGCTTGCTAGTGGGTAGCCTAGCTTATCTGGCGATATTCGGCTATTAATCTATCTCTTTTCAAGTGGATACGAAAAACA  
GGAAGGACTCTTATCTGGCTTTTTCACCATATTTGCTGGCTTACTCTTGATTTTGGAGCCTACTTGGTTTGGAAATATGGTTT  
GGACAAGTCCGTTCTAAAAGGGACCAATGGCTCAGGTTGTGACAGATCTGACTGGTTTTCGAACGACTAGCTTTCGCTGGAGG  
GGCTTGATCGGGGTCGCTCTTTATATTTCCAACAGCCTTCTCTTTTCAAATATCGGAACCTACTTTATTGGTTCTATCTTGATT  
TAGTGGGTTCTCTCTAGTCAGCCCTTGGTCTGTTACGATATTGCTGAATTTTTCAGTAGAGGCTTTGCCAAATGGTGGGAA  
GGGCACGAGCGTCGAAAAAGAGGAACGCTTTGTCAAACAAGAAGAAAGCTCGCCAAAGGCTGAGAAAGAGGCTAGATT  
AGAACAAGAAGAGACTGAAAAAGCCTTACTCGATTGGCTCTCTGTTGATATGGAACCGGTGAAATTCGACAGAGGAAGC  
TGTTCAAATCTTCCACCTATCCAGAAGAAAAGTGGGTGGAACCAGAAATCATCTGCCTCAAGCTGAACCTAAATTCCT  
GAACAGGAAGATGACTCAGATGACGAAGATGTTCAAGGTCGATTTTTCAGCCAAAGAAGCCCTTGAATACAACTTCAAGCT  
TACAACCTTTTGACACCAATAAAGGATCAAGTCAAGTCAAGAGAAAATTTGTCAGAGAAAATATCAAAATCTTGAAG  
CAACCTTTGCTAGCTTTGGTATTAAGGTAACAGTTGAACGGGCCGAAATTTGGCCATCAGTGACCAAGTATGAAGTCAAGCC  
GGCTGTTGGTGTAAAGGTCAACCGCATTTCCAATCTATCAGATGACCTCGCTTAGCCTTGGCTGCCAAAGATGTCCGGATTG  
AAGCACCAATCCCTGGGAAATCCCTAATCGGAATTGAAGTGCCCAACTCCGATATTGCCACTGTATCTTCCGAGAAGTATG

GGAAACAATCGCAAACGAAAGCAGAAAAATTTCTTGAAAAATTCCTTTAGGGAAGGCTGTTAATGGAAACCGCAAGAGCTTTTGAC  
CTTTCTAAAAATGCCCACTTGGCTAGTTGCAGGTTCAACGGGTTCAAGGAAGTCAGTAGCAGTTAACGGCATTATTGCTAGCAT  
TCTCATGAAGGCGAGACCAGATCAAGTTAAATTTATGATGGTCGATCCCAAGATGGTTGAGTTATCTGTTTACAATGATATTC  
CCCACCTCTTGATTCAGTCGTGACCAATCCACGCCAAGCCAGCAAGGCTCTGCAAAAGGTTGTGGATGAAATGGAAACCG  
TTATGAACCTCTTTGCCAAGGTGGGAGTTCCGAATATTGCAGGTTTAAATGCCAAGGTAGAAGAGTTCAATTTCCAGTCTGAGT  
ACAAGCAAATTCGGCTACCATTCATTGTCGTGATTGTGGATGAGTTGGCTGACCTCATGATGGTGGCCAGCAAGGAAGTGA  
AGATGCTATCATCCGTCTTGGGCAGAAAGGCCGTGCTGCAGGTATCCACATGATTTCTTGCAACTCAGCGTCCATCTGTTGATG  
TCATCTCTGGTTGATTAAGGCCAATGTTCCATCTCGTGTAGCATTTGCGGTTTCATCAGGAACAGACTCCCGTACGATTTTGG  
ATGAAAATGGAGCAGAAAAACCTTCTGGTGCAGGAGACATGCTCTTTAAACCGATTGATGAAAATCATCCAGTTCTGCTCCA  
AGGCTCCTTTATCTCGGATGACGATGTTGAGCGCATTGTGAACCTTCATCAAGACTCAGGCAGATGCAGACTACGATGAGAGT  
TTTGATCCAGGTGAGGTTTCTGAAAATGAAGGAGAATTTTCGGATGGAGATGCTGGTGGTGATCCGCTTTTGAAGAAGCTA  
AGTCTTTGGTTATCGAAACACAGAAAGCCAGTGCCTCTATGATTACAGCGTCGTTTATCAGTTGGATTTAACCGTGCCGACCCGT  
CTCATGGAAGAACTGGAGATAGCAGGTGTATCGGTCCAGCTGAAGGTACCAAACTCGAAAAAGTGTACAACAATAA

4176.1 (SEQ. ID. NO. 309)

ATGAGTTATTTTAAAAAATAAAATTCGATAAATCCCAGTTCAAACTTGGTATGCGAACCTTTAAACAGGTATTGCTGTTTT  
TCTAGTTCTCTTGAATTTTGGCTTTTTTGGCTGGAAAGGCTCTCAAAATGGTGGCTTTGACAGCCGTTTTAGCCTGAGGGAGAG  
TTTTGATGAGAGTGTTCATTTGGGACTTCGCGTATTCTAGGAAATAGTATCGGTGGACTCTATGCCTGGTCTTCTTCTATT  
AAATACCTTTTTCCACGAAGCCTTTGGGTGACCTTGGTAGTTGTTCCAAATCTGCACCATGTTAAACCATTTAGACAAATGTAG  
CCATGAATAACAAAGCAGGGGTTATTGGTGGTGTAGCAGCTATGTTAATCATTACCCTATCAATTTCAAGTGGTGAGACAAT  
TTGTACGTGTTGTGCGTGTATTAGAAACGTTTATGGGAGTTTTTGTGCGCAATTATCGTAAATTACGATATTGATCGTATTTCG  
TCTCTTTTAGAGAAAAAAGAAAAATAA

4178.2 (SEQ. ID. NO. 310)

ATGAATAAATCAGAACACCGCCACCAACTTATACGCGCTCTTATCACAACAAAAAAGATTATACACAGGCTGAGTTGCAAG  
CCCTTCTTGCTGAGAACGACATTCAAGTAACCCAGGCAACCCCTCTCAGCGACATCAAAAAATATGAACCTATCAAAAGTCCG  
CGAAGAAAGATAGCGCTTATTATGTTCTTAACAATGGTTCCATCTCAAAATGGGAAAAACGCTCTGAACTCTACATGGAAGAC  
GCCCTGTCTGGATGCGCCAGTTCAACACCAAGTCTACTAAAAACCCCTTCTGGACTGGCTCAATCCTTTGGTCTATCATT  
GATACTTTGAGCTTCCCTGACGCTATCGCTACCTTTTGGTGAATGATGTCTGTCTTATCATCTGTGAAGATGCAGATACTGCT  
CAAAAGTGCTTTGAAGAACTGAAAAAATTCGCCCCACCATTTTTCTTTGAAGAATAA

4179.1 (SEQ. ID. NO. 311)

ATGAAAAGTATAAAATGCTCTATCTTACATGGGAATTCGTGCTTGAATATTATTTTCCCATCCTAACTGGAACCTA  
TGTGCGCGGTGCTTGGACCGAACTGACTATGGTTACTTCAACTCAGTCGACACTATTTTGTCAATTTTCTTGGCCTTTGCAAC  
TTATGGTGTCTATAACTACGGTTTAAAGGGCTATCAGTAATGTCAAGGATAACAAAAAGATCTTAACAGAACCTTTTCTAGTC  
TTTTTATTTGTGCTATCGCTTGTACGATTTTGACCACTGCTGTCTATATCCTAGCCTATCCTCTCTTCTTACTGATAATCCAAT  
CGTCAAAAAGGTCTACCTTTGTTATGGGGATTCAACTCATTGGCCAGATTTTTTCAATCGAATGGGTCAATGAAGCTCTGGAAA  
ATTACAGTTTTCTCTTTTACAAAACCTGCTTCATCCGTATCCTGATGCTGGTCTCTATTTTCTTATTTGTTAAAAATGAACACG  
ATATTGTTGTCTATACACTTGTGATGAGTTTATCGACGCTGATTAACTACCTGATTAGTTATTTTGGATTAAAAAGAGACATCA  
AAGTTGTTAAAAATCACCTAAGTGATTTTAAACCACTCTTCTCCCTTGACAGCCATGTTAGTCTTTTGGCAATGCCAATGAC  
TCTTCACTTTTTTAGATCGCCTCTTCTCGTTAAAAACAGGGATTGATGTCAACGTTAGTTACTATACCATAGCTCAGCGAATTG  
TGACCGTTATAGCTGGGGTTGTAACAGGTGCAATTGGAGTGAGTGTGCTCTCAGTTACTATCTGGGGAAGGAGACAA  
AGAAGCCTATGTTTCTCTGGTTAATAGAGGTAGTGAATCTTTAACTCTTTATCATTCCACTGAGTTTGGACTCATGGTTTT  
AGGCAAAATGCCACTCTACTTTACGGTAGTGAATAATATATCGGAGGCGGCATCTTGACCTCTCTCTTCCGCTTTTCGTACGA  
TTATCCTGGCCTTAGATACCATTTCTGGTTCCCAAAATCTCTTTACCAATGGCTATGAAAAACGTATCACAGTCTATACAGTCT  
TTGCTGGGCTACTCAATTTGGGCTTGAATAGTCTCTTTTTTCAACCATATCGTGGCTCCTGAATACTACTTACTGACAATA  
TGCTATCAGAGACTTCTACTTGTCTTCTATATCATCTTATCCATCAGAAACAACTCACTCCACTTTGGATAAAACAATCGATT  
ATACTGTTGATCTCTCTCTTTTCACTTTTGTAGCAATTTATTTCTGATTAAATTCGTGTATCTCTGTAGATATGGTCAT  
TAATTTGCCATTTTGTATTA  
ATACTGGTTTGAATTGTCTTGCTATCAGCTATCTCTTATATTAGTCTACTTGTCTTACAAAAAGATAGCATTCTTCTATGAATTTT  
AAACCATGTCCTAGCCTTAAAAAATAAATTTAAAAAATCATAG

4179.2 (SEQ. ID. NO. 312)

ATGAAACAATAACCGTTGAAGATGCCAAACAAATTGAATTAGAAATTTGGATTATATTGATACTCTCTGTAAAAAGCACA  
ATATCAACTATATTATTAACCTACGGTACTGATTGGGGCGGTTGACATGAGGGCTTTATCCCTTGGGACGACGATATTGAT  
CTGTCCATGCCTAGAGAAGACTACCAACGATTTTAAACATTTTCAAAAGGAAAAAAGCAAGTATAAGCTCCTATCCTTAG  
AAACTGATAAAGAACTACTTTAACTAATTTTCAAGATAACCGACAGTACGACTAAAAATTATGATACTCGAAATACAAAAAC  
CTATGATCTGGTATCTTTATCGATATTTTCCCTATAGATCGCTTTGATGATCCTAAGGTCAATTGATTATTAACCTGGGA  
AAGCTTCAAACTGCTGTCTTTTCAAGTAAACATAAAAAATATTGTCTATAAGGATAGCCTTTTAAAAAGATTGGATACGAACAGCCT  
TCTGGTTACTCCTTCGACCGGTTTCTCCTCGTTATTTTGCAAATAAAATCGAGAAAGAAATTCAAAAAATATAGTCGTGAAAAAT  
GGGCAATATATGGCTTTTATCCCTTCAAAATTTAAGGAAAAGGAAGTCTTCCCAAGTGGTACCTTTGGATAAAACAATCGATT  
ACCCCTTTGAGAAATTTAAGCCTTCTGCACTGAAAAATTTGATACTATTGACACAATTTTATGGAGATTATATGACCCTAC  
CACCAGAAGAAAAACGCTTCTACAGTCATGAATTTACGCTTATAAATTTGGAGGATTAG

4179.3 (SEQ. ID. NO. 313)

ATGATAAAAAATCAATCATCTAACCATCACACAAAAACAAAGATTACGAGATCTTGTATCTGACCTAACCATGACCATCCAAG  
ACGGGGAAAAGGTTGCTATTATTGGTGAAGAAGGAAATGGCAAAATCAACCTTACTTAAAAATTTAATGGGGGAAGCTTTGTG  
TGATTTCACTATCAAGGGAACATCCAATCTGACTATCAGTCACTGGCCTACATTCCTCAAAAAGTCCCTGAGGACCTAAAA  
AAGAAAACCTTTACACGACTACTTTTATGATTCTATTGATTAGACTACAGTATCCTCTATCGTTTGGCGGAGGAATTGCAT  
TTTGATAGCAATCGTTTCGCAAGTGACCAAGAGATTGGCAATCTATCAGGGGGCGAAGCTTTGAAAAATTCAGCTTATCCATG  
AGTTAGCCAAACCCCTTTGAGATTCTATTTTATGATGAACCTTCAAAATGACCTAGACCTTTGAGACAGTTGATTGGCTAAAAGGC  
CAGATTCAAAAGACAGGCAACCGTTATTTTCACTTTCCCATGATGAAGACTTTCTTTCTGAAACCGGACGACTATTGTTCA  
CTTGGCACTGGTCAAAACCGTAAAGAAAGCGGAAACGCTAGTAGAGCATTTAGACTATGATAGCTATAGTGAGCAGAGAAA  
GGCTAATTTTGCACAAACAAAGTCAGCAAGCTGCTAACAAACCAAGAGCCTACGATAAAACCATGGAAAAACATCGGAGAGT  
TAAGCAAAATGTAGAAACTGCGCTTCGAGCTACCAAAAGATAGTACTGCCGGTCCCTATTGGCTAAAAAGATGAAAACCTGTC

CTCTCACAAGAAAAACGCTACGAAAAGGCAGCTCAGTCCATGACTCAAAAGCCACTTGAAGAGGAACAAATCCAACCTTTCT  
TTTCAGACATCCAACCATTAACAGCTTCTAAAGTCTTAGTCCAACCTGGAAAAAGAAAATTTGTCCATTGACGACCGAGTTTG  
GTTCAAAAACCTACAACCTAAGTGTCCGTGGCCAAAGAAAAAATCGGTATTATCGG  
GCCAAATGGTGTGGGAAATCAACTCTGTAGCCAAGTTACAGAGACTTCTGAATGATAAAAGAGAGATTTCACTTGGTTTT  
ATGCCACAAGATTACCACAAAAAAAGTCAATTGGATTTATCCCAATAGCCTATCTCAGTAAAAAGTGGGAAAAAGAGGAA  
CTACAGAAAAATCCAATCTCACCTAGCTAGTCTCAATTTCAAGTTATCCAGAAATGCAGCATCAAATTCGCTCCTTATCTGGCGG  
ACAACAGGGAAAACTCCTGCTTTTGGATTAGTCTGCGCAAAACCAAACTTTCTCCTGCTGGATGAACCCACACGAAACTTTT  
CTCCCACTTCTCAACCCCAATCAGAAAACTTTTGCTACCTATCCAGGCGTCTCATCACTGTTTCGCATGACCGTCTGTTCT  
TAAAAGAACTCTGCTCATCTATCGCATGACAGAACACGGTTTGAAGCTAGTTAATTTAGAAGATTTATAA

4179.4 (SEQ. ID. NO. 314)

ATGAAACCAAAAAACATTTTACAACCTTGCTTGCCGAGCAGAATCTTCCACTTTCCGACCAGCAAAAAAGAACAAATTTGAACGTT  
ATTTTGAGCTCTTGGTTCGAGTGGAATGAGAAGATTAAATTTGACGGCGATTACGGACAAGGAAGAAGTTTATCTCAAACATTT  
TTACGATTTCGATTGACCCATTCTTCAAGGTTTGATTCCCAATGAAACTATCAAACCTTCTTGATATCGGGGCTGGGGCAGGAT  
TTCTAGTCTACCAATGAAAAATCTCTATCCGGAGTTAGATGTGACCAATTATTGATTCACTCAATAAGCGCATCAACTTCCTA  
CAACTCTTGGCTCAAGAACTGGATTTGAACGGAGTTCAATTTTACCACGGACGTGCCGAAGATTTTGCCCAAGACAAGAACT  
TCCGTGCTCAATATGATTTTGTAAACAGCTCGTGGGTTGCCCGTATGCAGGTCCTATCTGAATTGACTATTCCTACCTTAAGG  
TTGGTGGCAAACTATTACCACTCAAGGCTAGCAATGCGCCTGAGGAATTATTAGAAGCTAAGAAATGCCCTCAATCTCCTTTT  
AGTAAGGTGCAAGACAAATCTCAGTACGCCCTACCGAATAGAGATCCGCGCTATACAGTGGTAGAAAAAGAAAAAGAAA  
CACCAATAAAATATCCACGTAAGGCTGGTATGCCAAATAAACGCCCACTTTAA

4179.6 (SEQ. ID. NO. 315)

ATGAGTATTAACTAATTTGCCGTTGATATCGACGGAACCCCTGTCAACAGCCAAAAGGAAATCACTCCTGAAGTTTCTGCTGC  
CATCCAAGATGCCAAAGAAGCTGGTGTCAAAGTCGTATTGCAACTGGCCGCCCTATCGCAGGCGTTGCCAAACTCTAGAC  
GACTTGCAGTTGAGAGACGAGGGGACTATGTGGTAACCTTCAACGGTGGCCTTGTCCAAGAACTGCTACAGGACATGAGA  
TTATCAGCGAATCCTTGACTTATGAGGATTATCTAGATATGGAATTCCTCAGTCGCAAGCTCGGTGTCCACATGCAATGCCAT  
ACCAAGGACGGTATCTATACTGCAAAATCGCAATATCGGAAAAATCACTGTACACGAATCAACCCTCGTCAGCATGCCTATCT  
TCTACCGTACCCCTGAAGAAATGGCTGGCAAGAAATTTGTTAAATGATGTTTATCGATGAACCAGAAATCTCGATGCTGC  
GATTGAAAAAATTCAGCAGAAATTTACGAGCGCTACTCCATCAACAAATCTGCTCCTTTCTACCTCGAATCCTTAAAAAGA  
ATGTAGACAAGGGTTCAGCCATTACTCACTTGGCTGAAAAACTCGGATTGACCAAGATGAAACCATGGCAATCGGTGATGA  
AGAAATGACCGTGCCATGCTGGAAAGTCGTTGGAAACCCGTTGTCATGGAAAAATGGAAATCCAGAAATCAAAAAAATCGC  
CAATACATCACCAAAACAAATGACGAATCCGGCGTTGCCCATGCCATCCGAACATGGGTACTGTAA

4179.7 (SEQ. ID. NO. 316)

ATGACTTGGATTATCTTGGAGTTATCGCTCTTATTGTTATTTTGTGATTGTTAGCTATAACGGTTTGGTTAAAAATCGTATG  
CAAACCAAGGAGGCTTGGAGTCAGATTGATGTTCAAGTGAACGTCGCAATGACCTCTTGCCAAACTTGATTGAGACTGTAA  
AAGGTTATGCCAAATATGAAGGTTCTACCCTTGAAAAGGTTGGCAGAACTACGTAACCAAGTGGCGGACGGCTTACCAGG  
AGAAGCTATGAAAGCCAGTGATGCCCTCACTCGTCAGGTTTCAGGTATTTTGCAGTTGCAGAAAGCTATCCAGATTTGAAA  
GCTAGTGCTAACTTTGTTAAATGCAAGAGGAGTTGACAAACACAGAAAAATAAATTTCTTACTCTCGTCAACTCTATAACA  
GTGTTGTGACGAACTACAATGTAATAATAGAACTTTCCCGAGCAATATTATCGCTGGAATGTTTGGATTAAAGCGGCAGA  
TTTCTTCAACACCTGAAGAGGAAAAAGTCGGTTCTTAAAGTTGATTTTAGCGGTTAGGTGACTAA

4179.8 (SEQ. ID. NO. 317)

ATGTTGTTTGATCAAAATGCAAGCAATAAACGAAAAACCTGGATTTTGTGCTGGTATTTTCTACTCTTAGCTCTTGTGGT  
TATGCGGTTGGTTATCTCTTTATAAGATCTGGACTTGGTGGTTTGGTTATTGCACTGATTATCGGCTTTATCTACGCTTTGTCT  
ATGATTTTCAATCGACAGAGATTGTCATGTCCATGAATGGAGCGCGTGAGGTGGATGAGCAACGGCACCAGACCTCTACC  
ATGTAGTGGAAGATATGGCTCTGGTCTGCTCAGATTCCTATGCCCGTGTTCATCATTGATGATCCAGCCTTAAATGCCTTTG  
CGACAGGTTCTAATCCTCAAAAATGCGGCTGTGCTGCGACTTCAAGTCTACTAGCTATCATGAATCGTGAAGAACTAGAAGC  
TGTTATGGGACATGAAGTCAGTCATATTCTGAATATGATATCCGTATTTGCACTATTGCAGTTGCCCTTGCTAGTGCTATCAC  
CATGCTTTCTAGTATGGCAGGTCGTATGATGTGGTGGGTTGGAGCAGGTCGACAGCAAGTGATGATGACCGAGATGGAAT  
GGTCTTGAAATCATTATGCTAGTGTTTCCCTACTAGCTATTGCTAGGCACTCTCGCTGCAACCTTGGTTCAAGCTCGCTATT  
TCTCGTCAGAGGGAATTTCTGGCAGATGCATCTAGTGTGAGCTGACTCGCAATCCCCAGGGAATGATTAATGCCCTAGATA  
AGTTGGACAATAGCAACCTATGAGTCGCCACGTCGATGATGCTAGCAGTGCCCTTTATATCAATGATCCTAAGAAAGGTGG  
GGGGTTCCAAAACTCTTTTATACCCACCCACCTATCTCAGAACGGATTGAACGTTTAAACAGATGTAA

4179.9 (SEQ. ID. NO. 318)

ATGAAATTAATTAATCAAGAAATTCGTAAGCAGTCTGAAGGTTTGAACCTTTGAACAAACGTTAGATTAGTTGATGACCTGC  
GTGCACGTAATCAAGAAATTTAGATGTAAAAGATATCCTTGCAGTTGGGAAAAGTACAATATGAAGACCGTATGTATTCTT  
AGATTATCAACTATCTTATACCATTTGTTCTTGTCTCGAGTCGAGTATGGAGCCAGTTGAGTTAGTTGAATCTTATCCAGTCAC  
GGAAGTTTTTCATGGAAGGCGCAACTAACCAGCTAGATCAAGAGTTTTAGATGATGACTTGGTCTTGCCCATCGAAAAATGGG  
GAGCTTGACCTTGCTGAGAGTGATCAGACAATATCCTGCTAAACATTCTATCAAGGCTTGACGGCTGAAGAAGAAGCTG  
GTCAAGGATTATCTCAGGAAATGACTGGCAATCTAGACAGAGGAAGAATACCAAGCTCAAAAAGCAGTAAAGAAAGAAG  
AAAAAGCTCTTTTGTGCTGGCTTACAAGGACTATTTGACGGAGATGAATAA

4179.12 (SEQ. ID. NO. 319)

ATGGAGTTATTTATGAAATCACAACTATGAAATCTATAAGTTAAAAAATCAGGTTTGACCAATCAACAGATTTTGAAG  
TGCTAGAATACGGTGAAAATGTTGATCAGGAGCTTTTGTGGGTGATATTGCAGATATCTCAGGTTGCCGTAATCCAGCCGTT  
TTTATGGAACGTTATTTTTCAGATAGACGATGCGCATTTGTGCAAGAGTTTCAAAAATTTCCATCTTTCTCTATTTTAGATGAC  
TGTTATCCTTGGGATTGTAGTGAATATATGATGCGCTGTACTTTTATTTTACAAGGGAAATCTTGACCTCTGAAAATTTCCCG  
AAGGTAGCGGTCGTGGGCACTGCTGCTTGTAGCAACAGGGAGCTAAGTCAGTTGAAAAAGTCATTCAAGGCTTGAAAAAT  
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TTGCAGTGATTGGAACAGGACTGGATGTGTTTTATCTTAAGCCAATAAACCGCTTGCAAGACTCATCGGCAATGACCATCT  
GGTTCTAAGTGAATATGGACCTGGTGAACAACCTCTGAAATTTTCTTCTGCCGTAATCGCATCATTGCTGGACTTTGTC  
GTGGTGTGATTGTAGCAGAGGCTAAGATGCGTTCAAGTGTCTCATTACGTGTGAGCGAGCAATGGAAGAAGGACCGCATGT





TACAGGCTATATCTTTAAAAAGGCTCTTGCAATGGAGGAACCTCCATCTCGATGAAAGAGCATGGAAAACAAGGACTGTTCCAA  
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AAGGACTTGAGTAG

4183.5 (SEQ. ID. NO. 323)

ATGTTGAAAAAATGGCAGTTAAAAGATGTTATCTTGCTTGCTTCTTGCTATCTTTTTTGGTGGGGTTTTCGTTGGTTACAGGA  
TATGTGTATAATATCTCAGTCTACTCTTAAACACCTCTTGTTTGCAGGCTTTGCCAATGAAATCCTCTTCGGTCTCTGGTGT  
ATGGCTGCGCCCATTTGCTGCCATCTTTGTTCCGAGAGTCGGAAGTGCAACGATTGGAGAAAGTGCTAGCTGCGCTTGCTGAAG  
TCCTTTATGGTAGCCAATTTGGTCTAGGAGCTCTTTTGTCTGGCTTTGTTCAAGGTTTGGGAAGTGAATTTGGTTTTATCGTAA  
CTAAGAAATCGCTATGAAAGTTGGCTCTCTCTAACTGCTAATAGTATTGGGATTACGCTTGTTAGCTTTGTCTATGAATACATT  
AAGTTAGGTTACTACGCCCTTTCCCTTCCGTTTGTCTTTCCTTGCTTGTTGGTACGTTTTATTTCTGTTTATTTCTCTGTACCAT  
CTTGGTTCTGGCCATTGTCAAACCTATCATCAGTTTGCAACTGGAGGAAAAGCATAG

4183.6 (SEQ. ID. NO. 324)

ATGGTCAAAGTAGCAACCCAGACACCGATTATCAGTCTCTTCTTGCTGATTTTATCCTTGGAACATCTTTCATTCTCTCGATT  
GCTCTGACTCTTTCCGTTAGTCGCATTTTGTATCTCTTTATGCTCTATTACCGTCGATTTAAAATGTTAGCTTGGATGATCATA  
CTTGCCATTTTACCATCTTTTGCCAACCTACTGGGCAGTTACAGTTACACGGAGATGCTTACACGGCAGTCATGCTTGGAAACGAG  
GGCCTTTGTGACAGTTTGTATCGGCCCTTGCTTTGTTTCTCTGTTTCACTAAAAGAGCTTCTCTGTACTTGGCTCAAAAGGG  
GCTATCACGCTCTTGGTCTATGCCTTGATTGTGGTATTCATTTCTTCTCTCATTACAGCAAGAAATCAAGTCCCTCAAAGA  
AGCTTGCCTATTACGTGGTCAAGAACTACATTTTGGTGGCCTTGATTACAGTAAGGTTCTGATGACAGTCTTTAGGTGGC  
GCCATCTTTACCTGAGAGCTCTATCTGCTCACGGATATGACGAACATGCACAGTTGAAGAAATAGCTATCGGACTTTTTATATT  
CCTAAAAAACAAAATTAATCTACCTGCTTTCTTTTATTGCTTCAAACCACTATTTTTATAA

4183.7 (SEQ. ID. NO. 325)

ATGAGAAAGCAACCAATTACAAGTTACAAAATTAACCATTTTATCTATGATGATTGCCCTTGATGTAGTCCTTACACCTATCTT  
TCGAAATTGAGGGAATGGCACCGATGCCAGTGTAGTCAATATTCTAGCAGGAATCATGATGGGACCTGTTTATGCCTTGGCT  
ATGGCTACAGTCACAGCCTTTATCCGTATGACGACTCAAGGGATTCCGCTTTAGCTCTACAGGAGCGACTTTGGAGCCCT  
TCTAGCAGGTCTCTTTATAAGTACGGTCGAAAAATTCACATTTCTGCTCTAGGAGAGATTTTGGGAACAGGTATTATTGGTT  
CCATTGTTTCTATCTCTGTTATGGTACTCTTTACAGGATCAGCTGCTAAGCTTAGCTGGTTTATCTACACGCCCTCGATTTTTCG  
GAGCAACCTTGATTGGTACAGCGATTTCTTTATTGCCTTCGATTTTAAATCAAGCAGGAATTCTTTAAAAAAGTGACAGGGA  
TATTTCTTTAGTGAAGGATAGACTGA

4183.8 (SEQ. ID. NO. 326)

ATGCAGGAATTTACAAATCCCTTTCTATAGGCTCTAGTTCCCTCACTTCACTGCATTACCAATGAGATTTCTTGAGATGCTG  
GCAAAATGGGATTTTGGCTCTGGGATGCAAAACCTGTATGGCAGATGATTCCTCGTGAAGTTCTTGATTTTACTAAGCAAAGTCA  
GGCTCTCTTCACTAATTTGGGGCATTTGTGAGCTGAGAAGGAAAAAGCAATCCGATGGCAGCTTCGTATGCAAAACCAATCT  
TCTCTCCCGATGGTATGATGCGGTTGGCGTAACGACTTCATCCATTTCGTAAGAGCTTAGTTAAAGACCTTTAGACTATAG  
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GCTAAAGATCAAGAAACGGAGGATTTGCTTCAAGTCTTGAAGACTGGTGTGACACCTATCTGGTATGTCTTTCTTAGTCAC  
AGGTCCCAAGGACCTCGTCTTTCGAAAAATCAGGTCGCTGACTGGGAAATGGCTGTAAGTGAATAGACTGGATAACAGGG  
ACAGGAGACTTGTTGGAGCCTTAACAGCTGTTTTCTCAGCCAAGGAAAGACTGGTTTTGAAGCTTCTTGCTTAGCAGTCTC  
TTATCTCAATATCGCTGCTGAGAAAAATAGTTGTTCAAGGAATGGGATTGGAAGAATTTTCGTTACCAAGTACTCAATCAGCTTT  
CGCTCCTAAGAAGAGATGAAAAATTGGCTAGATACCATCAAAGGAGAGGTTTATGAATAG

4185.3 (SEQ. ID. NO. 327)

ATGAACCATAAAATCGCAATTTTATCAGATGTTTCATGGCAATGCGACGGCGCTAGAAGCAGTGATTGACAGATGCTAAAAATC  
AAGGGGCCAGTGAATATTGGCTTCTGGGAGATATTTTCTTCTGGTCCAGGCGCAATGACTTAGTCGCCCTGCTAAAGGAC  
CTTCTATACACAGCAAGTGTTCGAGGCAATTGGGATGATCGTGTCTTGAGGCTTTAGATGGGCAATATGGCTTAGAAGACC  
CACAGGAAGTTCAGCTCTTGGTATGACACAGTATTTGATGGGAGCGAATGGATCCTGCAACGATTGTCTGGCTACGAAGCTT  
GCCTTTGCTGGAAAAGAAAATTGACGGATTGCGCTTTCTATCTCTCATAAATTTACCTGACAAAAACTATGGTGGTACT  
TGCTAGTTGAGAATGATACAGAGAAAATTTGACCAACTGCTAGATGCGGAAACGGACGTGGCAGTTTATGGTCATGTTCAAA  
GCAGTTGCTTCTGTTATGGAAGTCAAGGGCAACAAATCAATCCAGGTCGATTGGCATGCCCTATTTTAAATTTGGGAGGCG  
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TGATTACGAAGCTGAGTTAGAATTGGCCAAGTCCAAGGGGCTTCCCTTTATCGAAATGTATGAAGAAGTGCCTGACGAT  
AACTATCAGGGGCACAATCTGGAATTATTAGCCAGCTTAATAGAAAAGCATGGGTATGTAGAGGATGTGAAGAATTTTTTGTG  
ATTTTTGTAA

4186.1 (SEQ. ID. NO. 328)

ATGAATGTAATCAGATTGTACGGATTATTCCTACTTTAAAAGCTAATAATAGAAAATTAATGAAACATTTTATATTGAAAC  
CCTTGAATGAAGGCCTTGTTAGAAGATCGGCCTTCTGTCTAGGTGACCAACGGGTCTTGAAAAGCTGGTTTTAGAA  
GAAGCTCCAGTATGCTACTCGTAAGGTAGAGGGAAGAAAAAACTAGCTAGATTGATTGTCAAGGTGGAATTCCTTA  
GAAATTAAGGAATCTTATCTAAAACAGATTGATTATCGATTATATAAAGGTCAAAATGGCTACGCTTTTGAATTTTCTC  
ACCAGAAGATGATTTGATTTGATTATGCGGAAGATGACATAGCAAGTCTAGTAGAAGTAGGAGAAAAGCCTGAATTTCAA  
ACAGATTTGGCATCAATTTCTTTAAGTAAATTTGAGATTTCTATGGAATTACATCTCCCACTGATATCGAAAAGTTTCTTGA  
ATCATCTGAAATTTGGGGCATCCCTTGATTTTATCCAGCTCAGGGGCAGGATTTGACTGTGGACAATACGGTTACCTGGGACT  
TATCTATGCTCAAGTTCTTGGTCAATGAATTAGACATAGCAAGTCTTCGCCAGAAGTTTGAGTCTACTGAATTTTTATTCCTA  
AGTCTGAAAAATCTTCTTGGTAAAGATAGAAATAATGTTGAATTGTGGTTGAAGAAGTATGA

4186.2 (SEQ. ID. NO. 329)

ATGAAGTGGACCAAGATTATTAAAAAAATAGAAGAACAAATCGAGGCAGGGATTTATCCCGGAGCCTCTTTTGGCTATTTTA  
AGGACAATCAATGGACAGAGTTCTATTTAGCCAGAGTAGCCAGAGCATGGCTTGACAGACTGAGGCAGGACTAGTTTATGA  
CCTAGCTAGTGTACAGCAAGGTTGTTGGGGTTGGCACAGTTTGTACCTTCTTGTGGGAAATAGGTCAATTAGATATTGATAGAC  
TGGTAATAGATTTTTTACCTGAGAGTGATTATCCAGACATCACTATTCGCCAGCTTGTACTCATGCAACAGACCTTGATCCT  
TTTATTCCTAATCGTGATCTTTTAAACAGCCCCTGAATTAAGGAAGCGATGTTTCATCTCAACAGACGAAGTCAGCCAGCCTT



Q. 6.

GAAACCATCGACTTCAAGTCAGGTCTGAAAAAATCACAAACAGCCATCGAAGCAGGAACAGCTCCAGACGTACTCTTTGATG  
CACCAGGACGTATCATCCAATACGGTAAAAACGGTAAATTTGGCTGAGTTGAATGACCTCTTCACAGATGAATTTGTTAAAGA  
TGTCACCAATGAAAACATCTGACAAGCAAGTAAAGCTGGAGACAAGGCTTATATGTATCCGATTAGTTCTGCCCATTTCTAC  
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CGTGCCTTTATCTCTAACCTTTATAGCGGTTCTGTAACAGATGAAAAAGTTAGCAATATACAACCTGATGATCCTAAATTCGT  
CAAAGGCTTTGAAAAAGCAACTAGCTGGATTAAAGACAATTTGATCAATAATGGTTCACAATTTGACGGTGGGGCAGATATC  
CAAACTTTTGCCAACGGTCAAACATCTTACACAATCCTTTGGGCCACAGCTCAAAATGGTATCCAAGCTAAACTTTTGAAG  
CAAGTAAGGTAGAAGTGGTAGAAGTACCATTCCCATCAGACGAAGGTAAGCCAGCTCTTGAGTACCTTGTAACCGGTTTGC  
AGTATTCAACAATAAAGACGACAAGAAAGTCGCTGCATCTAAGAAATTCATCCAGTTTATCGCAGATGACAAGGAGTGGGG  
ACCTAAAGACGTAGTTTCGTACAGGTGCTTTCCAGTCCGTACTTCAATTTGGAAAACTTTATGAAGACAAACGCATGGAAAA  
ATCAGCGGCTGGACTCAATACTACTCACCATACTACAACACTATTGATGGATTGTGTAAGTGAAGTGAACACTTTGGTTCCCAAT  
GTTGCAATCTGTATCAAAATGGTGACGAAAAACCAGCAGATGCTTTGAAAGCCTTCACTGAAAAAGCGAACGAAACAATCAA  
AAAAGCTATGAAACAATAG

4188.12 (SEQ. ID. NO. 336)

ATGCAATCTACAGAAAAAAACCATTAAACAGCCTTTACTGTTATTTCAACAATCATTTTGCTCTTGTGACTGTGCTGTTTCATC  
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CCAACCATGGAAGAACTTCCAACAACCTCATGGTGCAGAACCTGGCTTGCATGGATGGAACTCAGATTATTTCTCATTGGT  
AACCATGTTCTTAGTTTGTGCAACCTCATCTCTAGCAGGTTATGTATTGGCTAAAAAACGTTTCTATGGTCAACGCATTCTATT  
TGCTATCTTTATCGCTGCTATGGCGCTTCCAAAACAAGTTGTCCTTGTACCATTGGTACGTATCGTCAACTTCATGGGAATCCA  
TGATACTCTCTGGGCAGTTATCTTGGCTTTGATTGGATGGCCATTCGGTGTCTTCCCTCATGAAACAGTTTCAGTGAATAATCC  
TACAGAGTTGCTTTGAATCAGTAAATCGAGGTTGTGGTGAGATTGCTACCTTCTGGAGTGTAGCCTTCCCGATTGTGAAC  
CAGGGTTTGCAGCCCTTGCAATCTTTACCTTCATCAATACTTGAATGACTACTTCATGCAATTGGTAATGTTGACTTCACGTA  
ACAATTTGACCATCTCACTTGGGGTTGCGACCATGCAGGCTGAAATGGCAACCAACTATGGTTTGATTATGGCAGGAGCTGC  
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GATAA

4191.1 (SEQ. ID. NO. 337)

ATGAAAAAACTTTTTTCTTACTGGTGTAGGCTTGTTCCTTCTCCACTCTCTGTTTTTGGCCATTGATTTCAGATAAACT  
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TGAGAAAGACTGCCTAAATCTAGCTTTTTACAGTAAAAAAGAAGAACTCTTTCCAATTTGTTTGGCGATTACAAGGTATCTG  
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GGTATTGAACCAGATGCAAGAAGGAGTGAGAAAAACGAGTTTCTTCTGGGGGCTCCAGATTATTATCGTCTTTAACTGGT  
GGGGAAGAGGCTTGCAAGTGGGTATGGGTGCTTGAATCTCTGCCCCTATTATCGGATTGGTTTGTCTTGTACAGTTT  
AGACGTTTCATGGCTATCTTTACCTCCCTTTGCCAATCTTGGTTTCTAGGGTTAGTTTGTCTGTTTCTATTGGAAGCTT  
CGACTAGATAAATCGTGATGGTTTCTAAATGAAGCGGAGCTGAGGTCTACTATCTGAGACAGTTTGTAAAAATATGTTGC  
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CTGGCAGTACGTTTTATCATTCAACAGCAAAATGAGCCATTAGTGTGCGAAATACAGCAAGCACCTACTCTGTAT  
CTTCTGGAAGTGGAAGTTCTGGTGGTGGCTTCTCTGGAGGCGGAGGTGGCGGCAGTATCGGTGCCTTTTAA

4191.2 (SEQ. ID. NO. 338)

ATGAAAAAAGTAAAGAAAGATATTTTCAGAAAGCAGTTGCAGGACTGTGCTGTATATCTCAGTTGACAGCTTTTTCTTCGATAG  
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TAGGAGATGCGCTCTTTGAGTTGAAAAACAATACGGATGGCACAACCTGTTTCGCAAGGACAGAGGGCGAAACAGGAGAAG  
CGATATTTTCAAAACATAAAACCTGGGACATACACCTTGACAGAAAGCCCAACCTCCAGTTGGTTATAAAACCTCTACTAAACA  
ATGGACTGTTGAAGTTGAGAAGATGGTGGGACGACTGTCCAAGGTGAACAGGTAGAAAAATCGAGAAGAGGCTCTATCTGA  
CCAGTATCCACAACAGGGACTTATCCAGATGTTCAACACCTTATCAGATTATTAAGGTAGATGGTTCGGAAAAAACGGGA  
CAGCACAAGGCGTTGAATCCGAATCCATATGAACGTGTGATTCCAGAAGGTACACTTTCAAAGAGAATTTATCAAGTGAATA  
ATTTGGATGATAACCAATATGGAATCGAATTGACGGTTAGTGGGAAAAACAGTGTATGAACAAAAAGATAAGTCTGTGCCGT  
GGATGTCGTTATCTTGTCTGATAACTCAAATAGTATGAGTAACATTCGAAACAAGAATGCTCGACGTGCGGAAAGAGCTGGT  
GAGGCGACAGCTTCTCTTATGATAAAATACATCTGATTCAAAAAATAGGGTAGCGCTTGTGACTTATGCTTCCACTATCTT  
TGATGGGACCGAGTTTACAGTAGAAAAAGGGGTAGCAGATGATAAAACGGAAGCGATTGAATGATTCTCTTTTGGAAATAT  
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TGCTCCTGATGGGTATGATGCTTTACGGTAGGTATTGGTATTAACGGAGATCCTGGTACGGATGAAGCAACGGCTACTAGTT  
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TTTCCACACCATCGTAACGTAAAAGAAATCAATTGAGAATGGTACGATTACAGATCCGATGGGTGAGTTAATTGATTTGCAA  
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AAAATGGCACTTATCAAAATGTGAGAACAGGTGAAGTGGTAAGTTGACCTTTAAAAATCTGTCAGATGGGAAATATCGATT  
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AGAGATGTGACTTCAATCGTTCCACAAGATATACCAGCGGGTTACGAGTTTACGAATGATAAGCACTATATTACCAATGAAC  
CTATTCTCCAAAGAGAGAATATCCTCGAAGTGGTGGTATCGGAATGTTGCCATTCTATCTGATAGGTTGCATGATGATGGGA  
GGAGTTCTATTATACACACGGAAACATCCGTAA

4191.3 (SEQ. ID. NO. 339)

ATGAAATCAATCAACAAATTTTAAACAATGCTTGCTGCCTTATTACTGACAGCGAGTAGCCTGTTTTCAGCTGCAACAGTTT  
TGCGGCTGGGACGACAACAACATCTGTTACCGTTTCATAAACTATTGGCAACAGATGGGGATATGGATAAAATTGCAATGAG  
TTAGAAACAGGTAACATATGCTGGTAATAAAGTGGGTGTTCTACCTGCAAAATGCAAAAGAAATGGCGATTGTTATGCTGTT  
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AGGGGCAATGCCGGCAACTGCAATGAAAAAATTAACAGAAGCTGAAGGAGCTAAATTTAACACGGCAAAATTTACCAGCTGC  
TAAGTATAAAATTTATGAAATTCACAGTTTATCAACTTATGTCGGTGAAGATGGAGCAACCTTAACAGGTTCTAAAGCAGTTT  
CAATTGAAATTTGAATTTACCATTTGAACGATGTTTGAGTGGCATTGTTATCCAAAAAATACAGAAAGCAAGCCAAAAATTTGA  
TAAAGATTTCAAAGGTAAAGCAAAATCCAGATACACCACGTGTAGATAAAGATACACCTGTGAACCACCAAGTTGGAGATGTT  
GTAGAGTACGAAATTTGTTACAAAAATTCAGCAGCTTGCTAAATTAAGCAACAGCAAACTGGAGCGATAGAATGACTGAAGGTT  
TGGCATTCAACAAAGGTACAGTGAAGTAAGTGTGATGATGTGCACTTGAAGCAGGTGATTATGCTCTAACAGAAGTAGC  
AACTGGTTTTGATTTGAAATTAACAGATGCTGGTTTAGCTAAAGTGAATGACCAAAACGCTGAAAAAACTGTGAAATCACT  
TATTCGGCAACATTGAAATGACAAAGCAATTTGTAGAAGTACCAGAATCTAATGATGTAACATTTAACTATGGTAATAATCCAG  
ATCACGGGAATATCCAAAGCCGAATAAGCCAAATGAAAAACGGCGATTGACATTGACCAAGACATGGGTTGATGCTACAG  
GTGCACCAATTCGGCTGGAGCTGAAGCAACGTTTCGATTGTTGTTAATGCTCAGACTGGTAAAGTTGTACAAACTGTAACTTTG  
ACAACAGACAAAAATACAGTTACTGTTAACGGATTGGATAAAAAATACAGAATATAAATTCGTTGAACGTAGTATAAAAGGG  
TATTCAGCAGATTATCAAGAAATCACTACAGCTGGAGAAATTTGCTGTCAAGAACTGGAAAGACGAAAAATCCAAACCACT  
GATCCAACAGAGCCAAAAAGTTGTTACATATGGTAAAAAGTTTGTCAAAGTTAATGATAAAGATAATCGTTAGCTGGGGCAG  
AATTTGTAATTTGCAAAATGCTGATAATGCTGGTCAATATTTAGCAGGTAAGAGCAGATAAAGTGAGTCAAGAAGAGAAGCAGTT  
GGTTGTACAAACAAAGGATGCTTTAGATAGAGCAGTTGCTGCTTAAACGCTCTTACTGCACAACAACAACTCAGCAAGAA  
AAGAGAAAGTTGACAAAGCTCAAGCTGCTTATAATGCTGCTGTGATTGCTGCCAACAATGCATTTGAATGGGTGGCAGATA  
AGGACAATGAAAAATGTTGTGAAATTAAGTTTCTGATGCAAGGTGCTGTTTGAATTAACAGGCCTTCTTGCAGGTACATATTAC  
TTAGAAGAAACAAACAGCCTGCTGGTTATGCATTACTAAGTACGCGTCAGAAATTTGAAGTCACTGCAACTTCTTATTACAG  
GACTGGACAAGGCATTGAGTATACTGCTGGTTACAGGTAAAGATGACGCTACAAAAGTAGTCAACAAAAAAATCACTATCCC  
ACAAACGGGTGGTATTTGGTACAATTATCTTTGCTGTAGCGGGGGCTGCGATTATGGGTATTGCAGTGTACGCATATGTTAA  
AACAAACAAAGATGAGGATCAACTTGCTTAA

4191.4 (SEQ. ID. NO. 340)

ATGACAATGCAGAAAAATGCAGAAAAATGATTAGTCGTATCTTCTTTGTTATGGCTCTGTGTTTTCTCTTGTATGGGGTGCACA  
TGCAGTCCAAGCGCAAGAAGATCACACGTTGGTCTTGCAATTTGGAGAATATCAGGAGGTGGTTAGTCAATTTGCCATCTCGT  
GATGGTCATCGGTTGCAAGTATGGAAGTTGGATGATTTCGTATTCCTATGATGATCGGGTGCAAAATTTGAAGAGACTTGCATT  
GTGGGATGAGAATAAACTTTCTTTTCAAAAAGACTTCGTTGAGATGACCTTCCTTGAGAATCAGATTGAGAGATTCTCAT  
TTCCAAATGGTCTTTACTATGTTGCTCTATTATCCAGCGGATCGGTTTCTTATCCAGCTGAATTTCTTTTGAATGACAG  
ATCAACCGGTAGAGCCTTTGGTCAATTGTAGCGAAAAAACAAGATACAATGACAACAAAGGTGAAGCTGATAAAGGTGGATC  
AAGACCACAATCGCTTGGAGGGTGTGCGCTTTAAATTTGGTATCAGTAGCAAGAGATGTTTCTGAAAAAGAGGTTCCCTTGAT  
TGGAGAAATACCGTTTCTGTTCAAGTATGAGGACAAGTCTCTATCTGATAAAAAATGGAGAGATTTTGTGACAAAT  
CTTCTCTTTGGGAATATCGTTTCAAGGAGGTGGAGCCACTGGCAGGCTATGCTGTTACGACGCTGGATACGGATGTCCAGCT  
GGTAGATCATCAGCTGGTGACGATTACGGTTGTCAATCAGAAATACCACGTGGCAATGTTGACTTTATGAAGGTGGATGGT  
CGGACCAATACCTCTCTTCAAGGGGCAATGTTCAAGTCAAGAAAGAAAGCGGACACTATACTCTGTTCTTCAAAATG  
GTAAGGAAGTAGTTGTAACATCAGGGAAAGATGGTCTTTCCGAGGTGGAAGGTCTAGAGTATGGGACATACTATTTATGGGA  
GCTCCAAGCTCCAAGTGTATGTTCAATTAACATCGCCTGTTTCTTTACAATCGGGAAAGATACTCGTAAGGAAGTGGTAA  
CAGTGGTTAAAAATAACAAGCGACCAAGGATTGATGTGCCAGATACAGGGGAAGAAACCCCTTGATATCTTGATGCTTGTG  
CCATTTTGTGTTTGGTAG

4191.5 (SEQ. ID. NO. 341)

ATGAGCCACATATACTTATCTATTTTCAAGTCTCTTGCTGATGCTAGGACTTGTCAATGTTGCTCAAGCCGATGAATATTTA  
CGCATCGGTATGGAAGCAGCATATGCTCCCTTTAACTGGACCCAGGATGATGATAGCAACGGAGCTGTCAAAATCGATGGGA  
CCAATCAGTATGCCAACGGATACGATGTTCAAATCGCCAAGAAAAATCGCTAAGGACTTAGGTAAGAACCTTTGGTTGTTAA  
AACCAAGTGGGAAGGTCTAGTCCCTGCCCTTACTTCTGTAAGATTGACATGATTATCGCAGGTATGAGTCCAAGTGCAGAA  
CGAAACAAAGAAATGCTTTTCGAGCAGTTACTATAGCAAGCACTTTTGTCTGTCAAAAAAGATTCTGCTTACGCA  
GTGCTAAATCTTTGGATGACTTTAACGGTGCAAAAAATCACTTCTCAACAAGGGGTCTACCTTTATAACTTGATTGCACAAATC  
CCAGGTGCTAAAAAAGAAACAGCCATGGGAGACTTTCGCTCAAAATGCGACAAGCTCTTGAGGCTGGTGTCTTATGATGCTTATG  
TTTCTGAACGTCCAGAAGCACTGACTGCTGAAGCTGCGAAGTCTAAGTTCAAGATGATTCAAGTAGAACCTGGTTTCAAAAC  
TGGGGAAGAGATACAGCTATCGCTATCGGGCTTCGTAAGAAATGACAACTCGTATTAGCCAAATCAATGCCAGTCAAAAC  
ATTTCAAAAGATGACCAAGTTGCCCTTGATGGATCGTATGATCAAGGAACAACCTGCCGAAGCTACAACAAGTGAAGAGACTA  
GCAGTAGTTTCTTTAGCCAAGTTGCTAAAAATCTTTTGAAAACTGGGACAACCTTTCGCTGGTGGTATCACTCTTTTAA  
TCTCTATCGTCGGAACCATAGGTCTCATTATGGAGTGTGCCATTGGTGTCTTCCGTACTGCTCCTCTCTGTAACAAACAAAG  
TCATTTACGGCCTACAAAAATAGTGGCTGGGTTCTCAATGTCTACATTGAAATTTCCGTGGTACGCCAATGATTGTTCAA  
TCGATGGTTATCTACTATGGAAGTGCCAAGCTTTCCGGATCAACC

TTGACCGTACACTGGCTGCTATCTTCATCGTTTCAATCAATACCGGTGCCTACATGACTGAAATCGTCCGTGGTGGTATCCTA  
GCAGTTGACAAGGGACAATTTGAAGCTGCGACTGCTCTTGGTATGACCCATAACCAGACCATGCGTAAGATTGTCCTACCTC  
AGGTAGTCCGTAACATCCTACCTGCAACTGGTAATGAATTTGTCATCAATATCAAAGATACATCTGTATTGAACGTTATCTCT  
GTTGTCGAACCTTTATTTCTCAGGAAATACCGTGGCAACACAAACCTATCAATACTTCCAGACATTTACAATCATCGCCGTGAT  
TTACTTTGTCCTCACCTTACCGTAACACGTAATCTACGCTTTATCGAGCGCAGAATGGACATGGATACCTACACTACAGGTG  
CTAACCAATGCAAACGGAGGATTGAAATAA

4191.6 (SEQ. ID. NO. 342)

ATGACACAAGCAATCCTTGAAATTAACACCTCAAAAAATCCTATGGACAAAACGAAGTGCTAAAAGACATTTCACTCACTG  
TCCACAAGGGAGAGGTCATCTCTATCATCGGAAGCTCTGGAAGCGGAAAATCGACCTTCTACGCTCCATTAACTACTTGA  
AACACCAACTGATGGACAAATCCTTTATCATGGACAAAACGTCCTCGAAAAAGGCTATGACCTCACGCAATACCGTGAAG  
TTGGGGATGGTTTTCCAATCCTTTAACCTCTTTGAAAAATCTCAATGTTCTTGAAAAACACAATCGTCTCAGACAACTGTCT  
AAAACGCGAACGCACAGAAGCTGAAAAGATTGCCAAAAGAAAACCTGGAAAAGGTCGGCATGGGAGAACGCTACTGGCAAG  
CCAAACCAAAACAACCTCTCAGGTGGTCAAAAACAACGTGTGCCATCGCTCGTCCCTCTCCATGAATCCGGACGCTATTCT  
CTTTGATGAACCAACATCAGCTCTCGATCCAGAAATGGTTGGAGAAGTCTCAAAATCATGCAGGACCTGGCTCAGGAAGGC  
TTGACCATGATTGCTGTAACCCATGAAATGGAATTTGCCCGTATGTCTCTCACCGGTATTATCTTTATGGATAAGGGCGTGAT  
CGCTGAAGAAGGTAAACCAGAAGACCTTTACCAATCCTAAAGAAGACCGAACAAGAGTTCTTCAACGCTATCTCAA  
ATAA

4192.3 (SEQ. ID. NO. 343)

ATGAAAAAGTATCAACTTCTATTCAAAATAAGTGCAGTCTTCTCTTACTTATTTTTCGTATTTAGTCTTTCTCAGCTGACGCTT  
ATCGTCCAAAACATTTGGCAATTTTCTTCTCAGATAGGCAATTTATCTTGGATTCAAAATATCTTGAGTTTACTTTTTATTGGA  
GTCATGATTGTGGTTCTTGTAAAGACAGGCCATGGTTATCTCTCCGCATTTCCAAGAAAAAATGGCTTTGGTATTCCGATTTT  
GACAGTATTAGTGCTAGTGTTCAGATCTCTTTAACGTTTCAGACAGCTAAACATGTTTCAGTCAACTGCGGAAGGTTGGGCTG  
TATTGATTGGTTATAGTGGGACTAATTTGCAGAGCTAGGTATTATATAGCCCTGTTCTTTCTGGTTCCACTGATGGAAGAA  
TTGATTTATAGAGATTACTGCAACATGCTTTCTTTAAGCATTCGCGATTGGTCTTGATTGCTTCTCTCTATTTTATTGTTG  
CTCTCCCTCATTTTCAAGCCTGCTAGTCTGTTAGATATCTTCGTCTTTGCAACAGTTGGAATCATCTTTGCTGGTTTGACCC  
GCTATACCAAGAGCATTTATCCATCCTATGCGGTGCATGTGATCAATAATATTGTAGCGACCTTCCCGTTTTTGCTCACTTTTC  
TACATAGGTCTTGGGGTAA

4193.1 (SEQ. ID. NO. 344)

ATGAACAAGAAACAATGGCTAGGTCTTGGCCTAGTTGCAGTGGCAGCAGTTGGACTTGGCTGCATGTGGTAACCGCTCTTCTC  
GTAACGCAGCTTTCATCTTCTGATGTGAAGACAAAAGCAGCAATCGTCACTGATACTGGTGGTGTGATGACAAATCATTCAA  
CCAATCAGCTTGGGAAGTTTGCAGGCTTGGGGTAAAGAACACAATCTTTCAAAAGATAACGGTTTCACTTACTTCCAATCA  
ACAAGTGAAGCTGACTACGCTAACAACTTGCAACAAGCGGTGGAAGTTACAACCTAATCTTCGGTGTGGTTTTGCCCTTA  
ATAATGCGAGTTAAAGATGCAGCAAAAGAACACACTGACTTGAATATGTCTTGATTGATGATGTGATTAAAGACCAAAAGAA  
TGTTGCGAGCGTAACTTTCCGCTGATAATGAGTCAAGTTACCTGCAAGGTGGTGGCTGCAGCAAAAACAACCTAAGACAAAACAA  
GTTGGTTTTGTAGGTGGTATCGAATCTGAAGTTATCTCTCGTTTTGAAGCAGGATTCAAGGCTGGTGTGCGTCAGTAGACCC  
ATCTATCAAAGTCCAAGTTGACTACGCTGGTTCAATTTGGTATGCGGCTAAAGGTAAAACAATGTCAGCCGCACAATACGCA  
GCCGTGCGAGATATTGTTTACCAAGTAGCTGGTGGTACAGGTGAGGTGCTTTGTCAGAGGCAAAATCTCTCAACGAAAGCC  
GTCTCGAAAAATGAAAAAGTTTGGGTATCGGTGTTGATCGGTGACCAAGAAAGCAGAAAGGTAAATACACTTCTAAAGATGGCAA  
AGAATCAAACCTTTGTTCTGTATCTACTTTGAAACAAGTTGGTACAACCTGTAAGATATTCTTAACAAGGCAGAAAGAGGA  
GAATTCCTGGCGGTCAAGTGATCGTTTACTCATTTGAAGGATAAAGGGGTTGACTTGGCAGTAACAAACCTTTCAGAAGAAG  
GTAAAAAAGCTGTCGAAGATGCAAAAGCTAAAAATCCTTGATGGAAGCGTAAAGT  
TCCTGAAAAATAA

4193.3 (SEQ. ID. NO. 345)

ATGTCTAAAAAATTACAACAAATTTCCGTTCCCTTGATTTCTGTATTCTAGGAATTTTACTCGGAGCCATTGTCATGTGGATC  
TTCGGTTATGATGCTATTGGGGCTACGAAGAAATGTTCTATACAGCCTTTGGCAGTCTGCGTGGGATTGGAGAAATCTTCCG  
TGCTATGGGTCTCTGGTCTTGATTGGTCTTGGTTTTGCCGTTGCCAGTCGAGCTGGTTTCTTTAACGTCGGACTTCTGGTCA  
GGCTTTGGCAGGTTGGATTCTCAGTGTTGGTTTTGCCCTGTCGATCCAGATATGCCCTGCTCCCTTGATGATTCTAGCAACAA  
TCGTGATTGCCCTTGATTGCTGGTGGGATTGTGCGAGCGATTCCAGGTATTCTTAGGGCTATCTAGGGACGTCAGAGGTTATT  
GTAACCATCATGATGAACATATTGTCTTGTATGTAGGGAATGCCTTTATCCATGCTTTCCCTAAAGACTTTCATGCAAAAGTAC  
AGATTCGACCATTCGTGTTGGGGCTAATGCAACCTATCAGACACCTTGGTGGCTGAGTTGACTGGTAACTCACGGATGAAT  
ATTGGTATTTTCTTTGCCATCATTTGCCGTTGCAGTTATTGGTTTCATGCTCAAGAAAAACAACCTCTTGGTTTTGAAATCCGTGCA  
GTTGGTCTTAATCCACATGCTTCAGAATATGCTGGTATTTCTGCCAAGCGGACTATTATCCTATCTATGATTATTCAGGTGCC  
TTGGCAGGTCTTGGTGGAGCTGTTGAAGGTTTGGGAACCTTCCGAACGCTCTATGTTCAAGGTTTCGTCAATTAGCTATCGGATT  
TAACGGAATGCGCGTTAGTTTGGCTTGGCGGCAACTCAACAAATGGTATACTCTTTGACGCTTCCCTATTGGCGTTCTCCAAGT  
TGGGGCTCCTGGTATGAATGCGGCGCAGGTACCATCTGAGCTTGTGAGCATTGTAACAGCGTCTATTATCTTCTTTGTCAGTG  
TTCATTACCTTATCGAACGCTTTGTCAAACCGAAAAACAAGTTAAAGGAGGTAAGTAA

4194.1 (SEQ. ID. NO. 346)

ATGGGAGTGAAAAAGAACTAAAGTTGACTAGTTTGCTAGGACTGTCTCTGTTAATCATGACAGCCTGTGCGACTAATGGGG  
TAACATAGCGATATTACAGCCGAATCGGCTGATTTTGGAGTAAATGGTTTACTTCTTTGCGGAAATCATTTCGCTTTTATCGT  
TTGATATTAGTATCGGAGTGGGGATTATTCTCTTTACGGTCTTGATTCTGACAGTCCTCTTGGCAGTCTTTCAGGTGCAAAATGG  
TGGCTTCTAGGAAAAATGCAGGAAGCTCAGCCACGCATTAAGGCGCTTCGAGAACAATATCCAGGTGAGATATGGAAAGCA  
GAACCAAACTAGAGCAGGAAATGCGTAAAGTATTTAAAGAAATGGGTGTCAGACAGTCAGACTCTCTTTGGCCGATTTTGAT  
TCAGATGCCGTTATTTTGGCCCTGTTCCAAGCCCTATCAAGAGTTGACTTTTTAAAGACAGGTCAATTTCTTATGGATTAACCT  
TGGTAGTGTGGATACAACCTTGTCTTCCGATTTTAGCAGCAGTATTACCTTTTTAAGTACTTGGTTGTCCAACAAAGCTTT  
GTCTGAGCGAAATGGCGCTACGACTGCGATGATGTATGGGATTCAGTCTTGATTTTTATCTTTGAGTTTATGCGCCAGGTG  
GAGTCGCCCTATACTGGACAGTGTCTAATGCTTATCAAGTCTTGCAAACTATTTCTTGAATAATCCATTCAAGATTATCGCA  
GAGCGCGAGGCCGTAGTACAGGCACAAAAAGATTGAAAAATAGAAAAAGAAAGCCAAAGAAAAAGGCTCAGAAAAACGAA  
ATAA

4194.4 (SEQ. ID. NO. 347)

ATGGTTATCGATCCATTGTGCTATCAACGAACTAGACTATTACTTAGTTTCACACTTCCACAGTGATCATATCGACCCATAACAC  
AGCTGCAGCAATTCTCAATAATCCTAAGTTAGAGCATGTTAAGTTTATCGGTCCTTACCAGTGTGGACGAATCTGGGAAGGAT  
GGGGTGTTCACAAAAGAACGTATCATCGTTGTTAAACAGGTGACACTATCGAATTAAGATATGAAGATTTCATGCAGTAGA  
ATCATTGGACCGTACTTGGTAACTCTCCAGTGAACGGTGCTGATGAGACAGGCGGTGAACCTTGTGGCTTGGCTGTTA  
CAGATGAAGAAATGGCTCAAAAGGCTGTTAACTATATCTTTGAAACACAGGTGGAACCATCTATCATGGTGCAGATTCTCA  
CTTCTCAAACTATTTTGCAAAACATGGTAAAGACTTTAAATTTGATGTTGCTTGAATAACTATGGTGAAATCCGGTAGGTA  
TCCAAGACAAAATGACATCTATCGACCTTCTCGTATGGCAGAAAATCTCGGTACCAAAGTCATTATCCAGTTCATCTATGAT  
ATCTGGTCTAACTTCACTGGCTTCTACTAATGAGATTCTAGAAGCTTTGGAAAATGCGAAAAGATCGCTTGCAATACGATTTC  
TCCATTTATCTGGGAAGTTGGCGGTAAAGTACACTTATCTCAAGATCAACACTTAGTAGAATACCATCATCCACGTGGTTTG  
ATGATTGTTTTGAACAAGACTCTAACATTCAATTTAAAGCTTTGCTATAA

4196.2 (SEQ. ID. NO. 348)

ATGTTCCCTTTCAGGCTGGTTGTCTAGTTTGTCTAATACTTATATCCATGATTTACTGGGGGTTCTTTTCCAGATAGTCCATTTT  
TAAATGCCTTTGAAAGTGCTATTGCGGCTCCTTTGGTAGAAGAACCTTGAAATTATGTCACCTGTTTTTGTGTTTGGCTTTGA  
TTCCTGTGCGAAAAATTAATCTTTGTTTTACTTGGAAATGCTTCCGGTTTGGGATTCCAAATGATTAAGGATATTGGTTATA  
TTCGTACGGATTGGCCAGAGGGCTTTGACTTTACTATTTCGCGAATTTTAGAGCGTATCATCTCAGGAATTGCCCTCACTGG  
ACTTTTTTCAGGTCTAGCTGTAGTAGGTGTTTACTTGCTTTACAGAGCCTATAAAGGACAGAAGGTTGGCAAGAAACAGGGCC  
TTATTTTCTAGGTTTAGCCTTGGGAAGTCACTTCTTGTGTTAACTCTCCTTTTGTGGAGTTGGAAACAGAGTTGCCTTTAGCGA  
TTCAGTGGTTACGGCTATTGCTCTCTATGGTTTTATCATGCTTATTGCTTTGTTGAGAAACACAATGAGTTGATGACCTAG

4197.1 (SEQ. ID. NO. 349)

ATGAAGGTGGAACACGTTGCGACGTCCTTTTCGAGGATGTCGCAATTTTTTTATTAGGATACTAATTATGGAGTTGCAAGAATT  
AGTGGAGCGCAGTTGGGCAATCCGACAAGCTTATCACGAACTGGAAGTTAAGCATCATGATTCCAAGTGGACGGTAGAAGA  
AGACCTCTTGGCTTTATCTAATGATATTGGAAATTTCCAACGACTGGTGATGACAAAGCAAGGACGCTACTATGATGAAACA  
CCCTACACACTGGAACAAAACTTTCAGAAAATATCTGGTGGCTATTAGAAGCTTCTCAACGTTTGGATATAGACATTCTGAC  
GGAAATGGAACCTCCTCTCTGATAAAGAAAAGCAATTGAACGTTAGGACTTGGAAAGTAG

4197.4 (SEQ. ID. NO. 350)

ATGCTTGATTGGAACAATTTTTCTAGCCTATCTGCGCTCCCGTAGTCGCTTTTTATCTATCTGCTTTCTTTGGCATTCTTG  
TCTTACTCTTTTCACTTTTTATTGCGAGTCTAGGAATTTACTTCTCTACTTTTTCTTCTTGTGTTGCTTTGTAACCATATTATTT  
TTCACCTTGGGACATATTGGTGGAAACGCAGGTCTATCGCCAGGAACCTTCTCTATGGAGAGAGGGAAGCCAAAGTCTCCTTTGG  
AAATAGCTTTAGCAGAAAAATTAGAACGCGCTGAGATGGAACCTCTATCAGCAGAGGTCAAAAGCAGAAAGAAAACCTGACGG  
ATTTGCTGGATTACTATACCTTGTGGGTCCATCAGATAAAGACCCCCATTGCAGCCAGTCAACTCTTAGTTGCAGAAAGTGGTC  
GACCGCCAACTGAAGCAGCAGCTAGAACAGGAAATTTTCAAAATCGACTCCTATACCAACCTAGTTTACAGTACCTGCGTT  
TAGAAAGTTTCCATGATGATTGGTCTTAAAGCAGGTTCAAATTGAGGACTTGGTCAAGGAAATAATTCGTAATATGCTCTT  
TTCTTTATTCAAAAAGGCTTAAATGTCAATCTACATGACCTTGATAAAGAAAATCGTGACGGATAAAAAAGTGGCTGCTAGTGG  
TTATTGAGCAAAATCAATCAAAACAGTCTCAAGTACACCAAGGAAGGTGGTCTGGAGATTATATGGATGACCAAGAGCTTTG  
TATCAAAGATACGGGAATCGGGATAAAAAACAGTGATGTCTCCGAGTATTTGAACGTGGCTTTTCAGGATACAATGGCCGT  
TTGACCCAGCAGTCTCTGGACTTGGCCTTTATCTATCTAAGAAAATTTCTGAAGAACTGGGGCACCAGATTCTGATCGAGTC  
TGAGGTGCGAAAAGGAACGACAGTGCGGATTCACTTTGCTCAAGTGAACCTTAGTCTTGTAGTAA

4211.2 (SEQ. ID. NO. 351)

ATGGAACCTTAATACACACAATGCTGAAATCTTGCTCAGTGCAGCTAATAAGTCCCCTATCCGCAGGATGAACTGCCAGAGA  
TTGCCCTAGCAGGGCGTTTCAATGTTGGTAAATCCAGCTTTATCAACACTATGTTGAACCGTAAGAATCTCGCCGTACATCA  
GGAAAACCTGGTAAAACCCAGCTCCTGAACTTTTTTAACATTGATGACAAGATGCGCTTTGTGGATGTGCTGGTTATGGCTA  
TGCTCGTGTCTTAAAAAGGAACGTGAAAAGTGGGGGTGCTATGATTGAGGAGTACTTAACGACTCGGGAAAAATCTCCGTGCG  
GTTGTCAGTCTAGTTGACCTTCGTCATGACCCGTGAGCAGTATGATGTCAGATGTACGAATTTCTCAAGTATTATGAGATTCC  
AGTCATCATTTGGCGACCAAGGCGGACCAAGATTCCCTGTGTTAAATGGAACCAAGCATGAATCAGCAATAAAAAGAAAT  
AAACTTTGACCCGAGTGACGATTTCTCTCTTTTCTATCTGTCAAGTGAACCTTAGTCTTGTAGTAA

4211.3 (SEQ. ID. NO. 352)

ATGACAAAGAAACAACTTCACTTGGTGATTGTGACAGGGATGAGTGGCGCAGGGAAAACCTGTAGCCATTCACTCCTTCGAGG  
ATCTAGGTTATTTACCATTGATAATATGCCGCCAGCTCTTTCGCTAAGTTTTCAGCTGGTTGAAATTAAGGAAGACAAT  
CCTAAGTTGGCCTTGGTAGTGGATATGCGTAGCCGTCTTCTTTTCAGAGATTCAAGCTGTTTTGGATGAGTTGGAAAAATCA  
AGATGGTTTTGGATTTCAAAAATCCTCTTTTGGATGCGGCTGATAAGGAATTGGTCGCTCGTTACAAGGAAACCAGACGGAGT  
ACCCCACTAGCAGCAGACGGTCGTATTTAGATGGAATCAAGTTGGAACGTGAACCTTGGCACCTTTGAAAAATATGAGCC  
AAAATGTGGTGGATACGACTGAACCTCACTCCAGTGAGTGCAGAAAACCCCTTGACAGAGCAGTTTTCAGACCAAGAAACAGC  
CCAGTCTTTCCGTATCGAAGTCATGTCTTTCCGATTTAAGTATGGAATCCCGATTGATGCGGACTTGGTCTTTGATGTCCGTTT  
CTTGCCAAATCCCTATTATTTACCAGAACTGAGAAACCAACGGGTGTGGATGAACCTGTTTATGATTATGTATGAACCATC  
CTGAGTCAGAAGACTTTTATCAACATTTATTGGCCTTGATTGAGCCGATTCTGCCAAGTTACCAAAAGGAAGGTAAGTCCGTT  
TTGACCATTTGCCATGGGATGTACGGGTGGACAACACCGTAGTGCGCATTTTGCTAAACGCTTGGCGCAGGACTTATCCAAGA  
ATTGGTCTGTTAATGAAGGGCATCGCGACAAAGACCGCAGAAAGGAACCGTAAACCGTTTATGATG

4211.4 (SEQ. ID. NO. 353)

ATGAGAAAACCAAGATAACGGTGATTGGTGGAGGGACTGGAAGTCCCGTCATTCTAAAAAGTCTGCGGGAAAAAGATGTG  
GAAATCGCAGCTATCGTGACGGTGGCAGATGATGGTGGTTCTTCAGGTGAACCTCGAAAAAATATGCAACAGTTGACACCGC  
CAGGTGATCTTCGTAATGTCCTTGTGGCCATGTCGGATATGCCTAAGTTTATGAGAAGGTCTTTCAGTATCGGTTCTCTGAG  
GATGCCGAGGCTTTTGGTGGCCATCCATTGGGAAATCTCATTTGCTGGCTTGTGAGAAATGCAGAGGTTCAAGCTTATAATGC  
CATGCAGTTATTGAGCAAAATTTTCCATACAACAGGGAATAATTTATCCTTCCAGTGACCATCCTTTGACCCTTCATGCAGTCTT  
TCAGGATGGGACAGAAGTGGCTGGAGAGATCATATTGTAGACCATCGAGGCATAATTGACAATGTCTATGTGACCAATGCC  
CTAAACGATGATACGCTCTGGCCAGCCGTGAGTAGTGACAGACCATCCTTGAAAGTGACATGATTGTCTTAGGGCCAGGTT

CCCTCTTTACCTCTATTTTGGCCCAATATCGTGATTAAGGAAATTTGGGCGGGCTCTTTTGGAAACCAAGGCAGAAATTGCCTAT  
GTCTGCAATATCATGACCCAACGTGGGGAGACGGAACACTTTACAGATAGCGACCGTGGAAAGTCTTGCATCGTCACCTTG  
GTCGCCCTTTTATCGACACTGCTTGGTGAATATTGAAAAAGTGCCTCAGGAATACATGAATTCACCGTTTGTATGAATAC  
TTAGTGCAAGTGGAACACGATTTTGTAGGTCTTTGTAAGCAAGTTTCGCGCGTGATTTTCATCTAACTTCCTTCGTCTGAAAA  
TGGCGGTGCCTTCCACGATGGAGATTGATTGTGGACGAGTTGATGCGCATTATACAGGTGAAAAAATGA

4213.1 (SEQ. ID. NO. 354)

ATGAAAAATTTGATAAAGTTGCTAATAATTAGATTGATTGTTAACTTAGCAGACAGTGTATTTTATATAGTAGCATTGTGGCA  
CGTTAGCAATAATTATCTTCGAGCATGTTCTTAGGAATATTTATTCAGTAAATATCTACCGGATTTGTTACTAATCTTTT  
TGGACCAAGTTATTGACAGAGTAAATCCGCAAAAAATCTTATAATATCAATTTTGGTTCAATTAGCAGTGGCTGTAATATTT  
TATTATTATTAACCAATATCATTTTGGGTGATAATGAGTCTAGTGTTTATTTTCAGTAATGGCTAGCTCCATAAGTTACGTG  
ATAGAAGATGTGTTGATTCCCTCAAGTGGTAGAATATGATAAGATTGATTTCGCAAAATCTCTTTTATGATTTCGTATAAAGT  
ATTAGATTCTATTTTAAATTCATTTCGCATCATTTTACAGGTGGCAGTAGGATTTATTTTATTTGGTTAAGATAGATATAGGCAT  
ATTTTACITGCTCTATTTATATTGTTGTTTAAAAATTTAGAAGTACGAATGCGAATATAGAAAACTTCTCTTTCAAATATTA  
CAAGAGAGAAGTGTGCAAGGTACAAAGTTTATTTTAAATAATAAATTATTTTAAAAACCAAGTATTTCTTTAAACGCTTATAA  
ACTTTTATTTTATTCATTTCAGACAGTAGTTGTACCGATTTTCTATTCGATATTTTGTATGGTCCGATTTTATGGTATTTTATA  
ACTATTGCTGGTTTGGGTGGTATATTGGGAAATATGCTAGCGCAATCGTAATAAAATTTTAAATCGAATCAAAATTGTTGG  
TGTATTCTTTTGTAAACGGCTCAAGTTGGTTAGTAGCAATTGTTATAAAAGACTATACTTTATCACTTATTTTATTTTTCGTT  
TGTTTTATGCTAAAGGAGTCTCAATATTATTTTAAATTCGTTGTACCAACAAATACCTCCACATCAACTCTTGGTAGGGTA  
AATACTACCATTGATTCTATTATTTCTTTTGAATGCCAATTGGTAGTTAGTTGCAGGAACGCTTATTGATTGAATATTGAA  
TTAGTGTTAATTGCTATTAGCATACCTTATTTTGTTCCTTATATTTTATACGGATAATGGATTGAAAGAATTAGTATAT  
ATTAG

4213.2 (SEQ. ID. NO. 355)

ATGATGTCTAACAAAAATAGGAAATTTCTGATTTTTCGATTCTCTATACAGTCCCTCTTTATGTTTGTATGGCGTTAAATTTGCTG  
GCTTCTTTAATGCCATCTGCCATTGCAAAATTATCTGTTTATGTAGTTTTCAGTCTATATGGCTCTTCTGTTCAAGGATAGAT  
TGATCCAACAATGGAAGGAGATTAGAAAAGACTAAAAGAAAAATCTTCTTTGGAGTCTTAACAGGATGGCTCTTCTCATTTCT  
GATGACTGTTGCTTTGAATTTGTATCAGAGATGTTGAAGCAGTTTGTGGGACTAGATGGACAAGGTCTAAATCAGTCTAATA  
TTCAAAGTACCTTTCAAGAACAACCACTACTGATAGCTGTTTTCGTTGTGTCATTGGACCTCTGGTAGAAGAATTATTTTCC  
GTCAGGTCTTATGCAATTACTTGCAGGAACGGTTGTCAGGTTTACTAAGCATTATTTCTGGTAGGACTTGTTTTGTCTGACTC  
ATATGCACAGTTTGGCTCTATCAGAGTGGATTGGTGCAGTTGGTTACTTAGGTGGAGGCCTTGCCTTTTCTATTATTTATGTGA  
AAGAAAAAGAGAATATCTACTATCCCTACTTGTTCACATGTTAAGCAACAGCCTCTCCTTAATCATTTTAGCTATCAGTATA  
GTAATAATGA

4224.1 (SEQ. ID. NO. 356)

TTGAAAAAGCCAATTATCGAATTCAAAAAACGTCTCTAAAGTTTTTGAAGACAGCAACACCAAGGTTCTCAAAGACATCAACT  
TTGAGTTGGAAGAAGGAAATTTACACCTTCTAGGTGCATCTGGTTTCGGGAAATCAACTATCCTAAACATTATTCAGG  
TTTACTGGATGCGACGACAGGAGATATCATGTAGACGGTGTTCGATCAATGATATTCCAACCAACAGCGGACGTACAT  
ACCGTCTTCCAATCCTATGCCTTGTTCACATATGAATGTGTTGAAAAATGTTGCCCTTCCACTTCGCTTGCCTAAAAATTGAT  
AAGAAAGAAATCGAGCAGCGTGTAGCGGAAGTTCTCAAGATGGTTTCAGTTGGAAGGTTATGAAAAACGTTCCATCCGCAAA  
CTTCTGGAGGACAACGTACGCGTGTGGCCATCGCCCGTATCATCAACCAACCCCGTGTGGTCTTGTGGACGAGCCTTT  
ATCAGCGCTGGACTTGAAATTGAGAACAGACATGCAGTACGAATTGCGTGAATTACAACAACGATTGGGCATTACCTTTGTC  
TTTGTCACTCAGATCAGGAAGAAGCTCTTGCCATGAGTGAAGTGGATTTCGTTATGAATGATGGCGAGATTGTCCAGTCTGG  
AACCCTGTGGACATCTACGATGAGCCAATCAACCACTTTGTTGCCACCTTTATCGGGAGTCAACATCTTGCCAGGTACCA  
TGATTGAGGACTACTTGGTCAATTTAACGGCAACCGCTTTGAAGCGGTTGATGGTGGGATGAAGCCAAATGAACCTGTTGA  
GGTGGTTATTGCTCCAGAGGACTTGGCATTACCTTCTGAAGAAGGCAAGCTCCAAGTTAAGGTCGATACCCAGCTTTTCC  
GTGGAGTTTATTATGAATAATTATCGCCTATGACGAACCTTGAAATGAAATGGATGATCCACTCAACCCGTAAGGCTATCGTGG  
TGAGGAAATCGGTCTGGATTGAAACGAGAAGACATCCACATCATGCGTCTCAATGAAACCGAAGAAAGATTGCTGATGCTCGT  
ATTGAGGAGTACGTAGAAATCGAAGAGCAAGAAGCAGGTTTGATCAATGCAATCGAGGAGGAAAGAGATGAAGAAAAACA  
GCTCTAA

4252.1 (SEQ. ID. NO. 357)

ATGAAATCAATGAGAATCTTATTTTGTAGCTTTAATTCAAATCAGTTTGAGTAGCTGTTTCTATGGAAGGAATGCATCTT  
GTCCTTTAAACAAAGTACAGCTTTTTCATCGGAAGCATGGTTTTCGTTTCAGGAATCTGTGCTGGAGTAAATATCTTTATAC  
CCGTAAGCAAGAAGTCCATAGTGTCTTAGCCAGTAAGAAGTTCGGTGAAGCTTTTACAGTATGTTACTCTTAATTAATTTGT  
TAGGAGCTGTTCTTGTTTTGTGAGATAACTTGTTCATCAAAAAATACGCTGCAGCAAGAATTAGTTGACTTTTTATTGCCATCCT  
TCTTTTCTCTATTTGGGCTAGATTGCTGATTTTACCCTTGAAAAAATACGTGCGCGATTTTCTTGCTATGCTGGACAGAA  
AAAAGACAGTGTGGTGACTATTTAGCAACACTCTTTCTTAAAGAAATCCAATGACCATTGTCTCACTTCTGATTATATTG  
GACTGGGCTGTTTGTGAGCCTATCTTGTCCAAATTCGGTTAAGAAGGAAGTTTCTTTTATGGTCAATTTTCCGAGATC  
TTGATTGGTCATTGTTACGCTCATTTCTTTAG

4252.2 (SEQ. ID. NO. 358)

ATGGTTAAAAAAATTTAGGAATGGTGCTAGCTTTACTTTCTGTAAGTGTAGTAGGAGTAGGTGTTTTGCTTATACTATTTAT  
CAACAAGGGACAGAAACCTTAGCTAAAAACCTATAAAAAAATCGGTGAAGAAACCAAGGTTATTGAAGCGACTGAACCTCTA  
ACCATTTCTGTTAATGGGAGTGGACACCGGAAATGTTGAACGAAGTGAACCTTGGGTCGGTAGAAGTGATAGCATGATCTTGA  
TGACAGTGAATCCTAAAAACGAAAAAACAACAATGATGAGTTTGAAGCGGGATATTCTGACGCGCATTAATCAGGGAATG  
GTCAGGCTCATGAAGCGAAACTGAACTCAGCATATGCAGATGGTGGAGCAGAGCTTGCTATAGAAACCAATTCAAAAAATGA  
TGAATATCCATATTGATCGCTATGTGATGGTCAATATGAGAGGATTGCAAAAAACTAGTGGATGCAATGAGGAGGATTACAGT  
CAATAATATCCTAGGTTTCCCAATTTCTATCAGTAGCAACGAAGAATTTAATACTATTTCTATCGGTGTTGGGAGCAACATA  
TTGGGGAGAAAGAACCCCTAGTCTATGCACGAATGCGTTACCAAGATCTGAGGGGGATTATGGTCTGCAAAAAACGTCAC  
GTGAAGTTATTCAAAAAGTCAATGAAAAAGCTCTCAGTTTAAATAGCATTGGTCAATTATCAAGAGATTCTAAAAGCTTTGAG  
TGACAATATGCAGACCAATATTGATTGTCTGCAAAAAAGTATCCCTAAGTTGCTAGGCTATAAAGATTCAATTTAAACCAATTG



AAACTCAGCAGTTGCAGGGTGAAGGAGAGATACTTCAAGGTGTTTCTTACCAGATTGTTTCGAGAGCACATATGTTGGAAAT  
GCAAAATCTACTCCGACGTTCTTTGGGACAAGAAGATTACTCAGCTTGAAACCAATGCGGTTTTATTGGAAGATTTATTG  
GCAGAGCACCTGTTGGTGATGAAGATAATTAA

4256.2 (SEQ. ID. NO. 359)

ATGAAAAACAAGCCTATGTCATTATTGCTCTCACCTCCTTCTATTTGCTTTTTTTCTCCACAGCTTGCTGGAAATACTT  
GATTTTGAAGTGGTCTATCTTTTGCACGATGTCGAAAAAAGAGAAAAATTTGCTTTTTATTGTTGGTTTTTCAGCATGTCATG  
ACCTGTCTCTTAGCCCTGTTTTGGCGAGGGATCGAAGAGCTTTCTCTAAGAAAAATGCAGGCTAATCTCAAGCGTTTTATTAGC  
AGGGCAAGAAGTGGTTCAGGTTGCAGATCCAGATTGGATGCCAGTTTCAAGTCCTTATCAGGTAAACTTAACTTTTGACA  
GAGGCTCTTCAAAAAGCTGAAAATCAGAGCCTTGCTCAGGAAGAGGAAATCATCGAGAAGGAACGGAAGCGAATTGCTCGG  
GATTTGCACGATACAGTCAGTCAGGAGTTGTTTGGGCCCCACATGATTTTATCGGGTATCAGTCAGCAGGCTTTGAAATTGGA  
TAGAGAAAAGATGCAGACCCAGTTGCAGAGTGTCACAGCTATTTAGAAAACAGCCAGAAAGGATTTGCGGGTTTTGCTCTTG  
CATTTGCGACCAAGTTGAACTGGAGCAGAAGAGCTTGATAGAAGGGATTCAAATTTCTTTTAAAAGAGCTTGAGGACAAGAGTG  
ATCTTAGGGTTAGTCTCAAGCAGAAATATGACGAAATTTGCCTAAGAAAAATCGAGGAGCATATCTCCGTATCCTGCAAGAGTT  
GATTAGCAATACCCTCCGACATGCCAGGCATCTTGCTAGATGCTACCTCTATCAGACAGATGTGCAATGCAAGG  
TGGTGGCAATGGGATTGGTTTCCAGTTAGGGAGCTTAGACGACTTGAGTTATGGACTGCGAAATATCAAGGAGCGGGTTGA  
AGATATGGCTGGAACAGTTCAACTCTTGACAGCTCCCAAGCAAGGGCTGGCGTTGATATCCGTATCCCTGTTAGATAAG  
GAATGA

4263.1 (SEQ. ID. NO. 360)

ATGATTGTTTCCATTATTTCTCAAGGATTTGCTCTGGGCTATTCTAGGTCTGGGAATCTTTATGACATTTAGGATTTTAACTTT  
CCAGATATGACGACAGAAGGTTCCCTCCCTCTTGGGGAGCTGTTGCTGTCACTTTGATAACCAAGGCGTGAACCCATTTT  
AGCGACACTTGTGCTGTAGGAGCAGGTTGTTTGGCTGGAATGGCAGCAGGCTTCTTTATACAAAAGGGAAGATCCCAACC  
TTGCTCTCAGGGATTTGGTGATGACTTCTTGCTCACTCAATCATGCTCTTGATTATGGGACGTGCGAATTTAGCCTGCTTGGA  
ACCAAGCAAAATTCAGGATGTTTTGCCTTTTGATTCCGATTTGAATCAACTCTTGACAGGTCTCATCTTTGTGAGTATTGTTATT  
GCTCTCATGCTCTTTTTCTTGGACACTAAACTCGGACAAGCCTATATTGCTACAGGGGATAATCCTGATATGGCTAGAAGTTT  
CGGGATTCTACTGGACGCATGGAGCTCATGGGCTTGGTCTTATCAAATGGTGTGATTGCCCTTGACAGGTGCCCTCATTGCTC  
AGCAAGAAGGTTATGCCGATGTGTCTCGAGGGATCGGGGTTATCGTTGTGGGGCTTGCAAGTTTGATTATTGGAGAAGTTAT  
TTTCAAGAGTTTGAGCTTGGCAGAGCGTTTGGTTACTATCGTTGTAGGTTCTATCGCTTATCAATTTTTAGTGTGGGCAGTTAT  
CGCACTTGGCTTTAATAACAAGTTACCTTGCTTTATACAGTGCCTTGATTTAGCAGTCTGCCTCATGATTTCCAACATTTAAGCA  
AACAATCTTGAAAGGAGCCAAGTTAAGCAAATGA

4346.1 (SEQ. ID. NO. 361)

ATGAAAAAATGAAAGTTTGGTCTACTGTACTTGCAACGGGAGTTGCTCTTACTACACTTGCTGCTTGGTCTGGAGGTTCAAA  
TTCTACGACTGCTTCTTATCTGAAGAAAAAGCTGATAAAAGTCAAGAATTAGTTATCTATTGCAACTCAGTCTCAAATGGTC  
GTGGTGATTTGGTTAACTGCTAAAGCAAAAGAAGCTGGTTTTAATATAAAAAATGGTTGATATCGCTGGCGCTCAATTAGCAGA  
CCGTGTTATTGCTGAGAAAGAATAATGCAGTTGCAGATATGGTATTTGGAAATTGGTGCTGTTGATTCAAATAAAATTAGAGATC  
AAAAATTACTAGTACAGTACAAGCCTAAATGGTTAGATAAAATTGATCAATCTTTATCAGATAAAGATAATTATTATAATCCT  
GTGATTGTTCAACCATTAGTTTTAATTGGGGCGCTGATGTAAGAAAGAAATGCCTAAAGATTGGACTGAATTAGGTAGTAAGT  
ATAAAGGTAAATATTCAATTTCTGGTCTTCAAGGAGGTACAGGACGGGCAATTCTAGCAAGTATCTTAGTTCGATACCTTGAT  
GATAAAGGTGAATTAGGTGTTTCCGAAAAAGGTTGGGAAGTAGCAAAAGAATATTTGAAAAATGCATACACTCTTCAAAAG  
GGAGAAAGTTCAATTGTTAAGATGTTAGACAAAGAAGATCCAATACAATATGGAATGATGTGGGGTTCTGGTGCAATTAGTTG  
GACAAATAAGAACAAAAATGTTGTTTTCAAAGTTATGACTCCTGAGATTGGTGTAACCTTTGTAAGTGAACAACTATGGTTTTA  
AGCACTAGTAAAAACAAGCGTTAGCTAAAGAATTTATTGATTGGTTGGTCAATCAGAAATTAAGTAGAATATAGTAAGA  
ACTTTGGATCTATTCTGCAATAAAGATGCCCTCAAAGATCTACCTGAAGATACGAAGAAATTTGTTGATCAAGTGAAACC  
ACAAATATTGACTGGGAAGCTGTTGGAAAGCATTGGATGAATGGGTAGAAAAAGGTGAATTAGAATACGTACAATAA

4346.2 (SEQ. ID. NO. 362)

ATGATTAAATTTGATAATATTCAAATTAATATGGTGATTTTGTGCAATTGATAATCTGAATTTAGATATACATGAAGGGGA  
ATTTTACATTTCTTGGGCTTCAGGATGGTAAATCAACTACTTTGAGAGCATTGGTAGGTTTTCTAGATCCATCATCAGG  
AAGTATTGAAGTTAATGGAAAGATGTCACCTATTGGAAAGCTGGAAGCTGGAATTTGATTGTTCAATCTTATGCGC  
TATTTCCAATATGACTGTTTTGATAATATTGCATTTGGTTTAAAAGTTAAGAAGGTAGCTCCAGATGTTATTAAGCTAAA  
GTATCAGCAGTGGCAGCAAAATTAAGATCTCTGATCAACAGTTACAGCGTAATGTATCAGAAATATCTGGGGGTCAACAA  
AAAGGTTAGCATTGGCTCGTCTGCTTCTGAACTAAAATCTTTGCTAGATGAACCATTTGCAACCTTGAACGCAAAA  
TTACGTGTAGATTGAGAAAAAGAGTTGAAAAGACTTCAAAAAGAGTTAGGTATTACTACTTTATATGTTACTCATGATCAAG  
AGGAAGCCTTGACTTTATCTGATAGAATTGCAGTCTTTAACAATGGATACATCGAACAGGTCCGGTACACCAGTAGAGATTTA  
TCATAATTCTCAAACCTGAATTTGTATGTGATTTATTGGAGATATTAATGTTTTGACCGATGAAACAGTCCACGAAGTATTAT  
TGAAAAATACAAGCGTTTTCTTAGAGGATAAAAAAGGATACATTCGATTAGAGAAAGTTTCGATTCAATCGTGAAACTGAACA  
AGATTTTATTCTAAAAGGACAATTATTGATGTTGAGTTTTCTGGAGTTACAATTCACTATACAATAAAAGTTTCTGAAAGTC  
AGATTCTTAATGTAACAAGTATTGATAGTCAGGCTGCTATTAGATCTGTCGGAGAAAGTGTGGAATTATTATCACACCATCA  
GACGTTCTGCAATTTAA

4346.3 (SEQ. ID. NO. 363)

ATGCGTCAATAAATTTAAAGATTGGCTTATTCTGTTTAGGGTTAATCTGGTTCTTAGTAACATTTATTATTTATCCAAAC  
TTTGATCTAGTAGTAATGTATTTGTAAGGAGGAGAATTTCCCTTGATGCTGTACATCGTGTCTAAAATCTCAGAGGGC  
ACTTCAGAGTATTATGAACAGTTTAAAGTTAGCATTTTCACTCATTATTACAGTTAATGTCTGAGGTATTTCTTTGTTCTATT  
TACAGAGTACTTTGATATTAAGGTGCTAAAAATTTAAAATTTAGGTTATATGACCTTTTAAATTTATGGAGGAGTGGTTTTAG  
CGACTGGATATAAATTTGCTATGGTCCTTATGGATGATTACAAAAATTTTACAAAATGTTATCCCTTCTTTAGACCCTAACT  
GGTTATTGGGTATGGTGCACTTTATTCATTATGACATTTTTCAGGAAGTCTAATCATACATTTGTTTTTAAACAAATACAATTC  
GAAGCGTTGACTATCACACTATTGAGGCTGCTCGAAATATGGGAGCAAAACCATTTACTGTTTCCGAAAAGTAGTGTACC  
AACCTTAATTTCAACTCTATTGCACTTACTATTATGTTTTTCTTAGTGGTTTATCTGCAGTAGCAGCACCCTATGATTTGGT  
TGGTAAAGAAATTTCAAACTATAAATCCAATGATTATTACATTTGCAGGAGTGGGAATTTCTCGTGAATTTGCTGCTCACTG  
CAATTTATTTAGGTATTGCAACTACAATTTTGTCTACTATCATGAATAAGATAGAAAAAGGTGGAAATTTATTTCTATCTCT  
AAGACTAAAGCGCTCTTAAAAACAATAAATTTGCGTCTAAGCCTTGGAAATATCATTGCTCACATTGTAGCATATGGATTGT  
TCACAGTTTTATGCTTCCACTAATTTTTATAGTATTATACTCATTTACAGATCCAGTTGCAATTTCAACAGGTAACCTAACAT



ab  
TATCAAACCTTTACTTTAGAAAATTATCGCTTATTCTTTAGTAATAGTGCGGCATTCTCTCCATTCTTGGTCAGCTTTATTTATTCT  
TATTATTGCTGCGACAACAGCAACAATTCTCGCAGTTGTATTTGCTCGTGTTGTCAGAAAACATAAAATCTCGTTTGTATTCTT  
ATTTGAATATGGTGCTCTACTTCCTTGGTTACTACCAAGTACACTTTTAGCAGTAAGTTTATTATTTACTTTTAATCAGCCACA  
ATTTCTTGCTTGAATCAGATTTTGGTAGGTAGTTTGGTAATTCTACTTATTGCATATATAGTTGTAATAATCCCATTTTCTTAT  
AGAATGGTACGTGCTATTTTATTAGTGTTGATGATGAGATGGAAGATGCAGCAAGAAGTATGGGTGCTTCACCTTTTATAC  
TATGATGAAGGTTATCATTCCATTTATTTACCGGTTGTTCTCTGTTATTGCTTTAACTTTAACTCTTTATTAAGTACTTC  
GACTTATCTGTATTCCTTTACCATCCCCTAGCTCAACCATTAGGTATTACGATTGATCTGCAGGTGATGAAACAGCAACATC  
TAATGCACAAGCTCTGGTATTTGTTTATACAATTGTTCTGATGATTATTTCTGGAACGGTATTATACTTCACACAAAGACCGG  
GGCGTAAAGTAAGGAAATAA

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Table 2

(SEQ. ID. NO. 1)

MEELVTLDCFLIDRTKIEANANKYSFVWKKTEKFSAKLQEQIQVYFQEEITPLLIKYAMFDKKQKRGYKESAKNLNWHYNDKE  
DSYTHPDGWYRRFHHTKYQKTQTDQEQEIKVYADEPESAPQKGLYMNERYQNLKAKECQALLSPQGRQIFAQRKIDVEPVFGQI  
KASLGKRCNLRGKRQVRIDMGLVLMANNLLKYSKMKZ

(SEQ. ID. NO. 2)

MGKGHWNRKRVSIRKFAVGACSVMIGTCAVLLGGNIAGESVYVADETLLHTAEKPKEEKMIVEEKADKALETKNIVERTEQSE  
PSSTEAIASEKKEDAVTPKEEKVSAKPEEKAPRIESQASNQEKPLKEDAKAVTNEEVNQMIEDRKVDNFQNWYFKLNANSKEAIK  
PDADVSTWKKLDLPYDWSIFNDFHESPAQNEGGQLNGGEAWYRKTFKLDEKDLKKNVRLTFDGVYMDSQVYVNGQLVGHYP  
NGYNQFSYDITKYLQKDGRENVIAVHAVNKQSSRWYSGSGIYRDVTLQVTDKVHVEKNGTTILTPKLEEQQHKGKVEHVTSKIV  
NTDDKDHELVAEYQIVERGGHVAVTGLVRTASRTLKAHESTSLDAILEVERPKLWTVLNDKPALYELITRVYRDGQLVDAKKDLFG  
YRYHHWTPNEGFSLNGERIKFHGVSLLHHDHGALEENYKAEYRRLKQMKEMGVNSIRTTNHPASEQTLQIAAELGLLVQEEAF  
DTWYGGKKPYDGRFFEKDATHEARKGEKWSDFDLRTMVERGKNNPAIFMWSIGNEIGEANGDAHSLATVKRLVKVIKDVVK  
TRYVTMGADKFRFGNGSGGHEKIADELDAVGFNYSEDNYKALRAKHPKWLIYGETSSATRTGRSYYRPERELKHSNGPERNYE  
QSDYGNDRVGVGKGTATASWTFDRDNAGYAGQFIWTGTDYIGEPTPHWNQNTQTPVKSSYFGIVDTAGIPKHDYLYQSQWVSVK  
KKPMVHLLPHWNWENKELASKVADSEKIPVRAYSNASSVELFLNGKSLGLKTFNKKQTSQDGRTYQEGANANELYLEWKVAYQ  
PGTLEAIARDESAGMERASIFIQPKDGGPLQTYAIQFLEENAPKIAHLSLQVEKADSLKEDQTVKLSVRAHYQDGTQAVLPADKVTF  
TSGEGEVAIRKGMLELHKPGAVTLNAEYEGAKDQVELTIQANTEKIAQSIRPVNVVTDLHQEPLPATVTVYEDKGFPHKTHKV  
WQAIPEKLDLSYQTFEVLGKVEGIDLEAKRVSVEGIVSVEEVSVTTPIAEAPQLPESVRTYDSNGHVSSAKVAWDAIRPEQYAKE  
GVFTVNGRLEGTLTKLHVRVSAQTEOGANISDQWTGSELPLAFASDSNPSDPVSNVNDKLISYNNQPNRWTNWNRTNPEASV  
GVLFGDSGILSKRSVDNLSVGFHEDHGVGVPSKYVIEYYVGKTVPTAPKNPSFVGNEDHVFNDSANWKPVNTLKAQQLKAGEM  
NHFSFDKVETAVRIRMVKADNKRGTSTIEVQIFAKQVAAAKQGGTRIQQVDGKDLANFNPDLDYLLSVGDKVPAVTVASVSN  
GLATVVPVSVREGEPRVIAKAENGDIAGEYRLHFTKDKSLSHKPAVAVKQARLLQVGALELPTKVPVYFTGDKGYETKDLTVE  
WEEVPAENLTAKGQFTVRGRVLSNLVAEITVRVTDKLGELTSDNPNYDENSNAFASATNDIDKNSHDRVVDYLDNGDHSNRR  
WTNWSPTSSNPEVSAGVIFRENGKIVERTVTQGGVQFFADSGTDAPSCLVLERVYVGPFEFVPTYYSNYQAYDADHPFNPNPENWE  
AVPYRADKDIAAGDEINVTFAIKAKAMRWMERKADKSGVAMIEMTFLAPSELPQESTQSKILVDGKELADFAENRQDYQITYK  
QORPKVSEENNQVASTVVDSEGSFVLRVLSVSGKQVKEYRIHLTKEKPVSEKTVAQVEDLPKIEFVEKDLAYKTVEKKDS  
TLYLGETRVEQEGKVGKERIFTAINPDGSKEEKLREVVEVPTDRIVLVGTPKPAQEAQKPVSEKADTKPIDSEASQTNKAQLPST  
GSAASQAAVAAGLTLLGLSAGLVVTKGKKEDZ

(SEQ. ID. NO. 3)

MKIMKKKYWTLAILFFCLFNNSVTAQEIPKNLDGNITHTQTSSESSESDEKQVDYSNKNQEEVDQNKFRIDKTELFTVTTDKHLEK  
NCCLELEPQINNDIVNSESNNLLGEDNLDNKKIKENVSHLDNRGGNIEHDKDNLESSIVRKYEWDIDKVTGGGESYKLYSKSNSKV  
SIALDSGVDLQNTGLLKNLSNHSKNYPNKGYLKKEEGEGIISDIQRLGHGTAVVAQIVGDDNNGVNPVHNINVRIFGKSSA  
SPDWIVKAIFDAVDDGNDIINLSTGQYLMIDGEYEDGTNDFETFLKYKKAIDYANQKGVIIAALGNDLSLNVSNQSDLLKLISRKK  
VRKPGLVVDVPSYFSSISVGGIDRLGNLSDFSNGKSDAIYAPAGSTLSLSELGLNNFINAEKYKEDWIFSATLGGYTYLYGNSFA  
APKVSGAIAMIIDKYKLDQPYNYMFVKKFWKKHYQZ

(SEQ. ID. NO. 4)

MKKTWKVFLTLVLTALVAVVLVACGQGTASKDNKEAELKKVDFILDWTPNTNHTGLYVAKEKGYFKEAGVDVDLKLPEESSSD  
LVINGKAPFAVYQDYMAKKLEKGAGITAVAIVIEHNTSGIISRKSDNVSSPKDLVGKKYGTWNPTELAMKLTVESQGGDFEK  
VEKVPNDSNSITPIANGVFDTAWIYYGWDGILAKSQGV DANFMYLKDYVKEFDYYSPIIANNNDYLDKNKEEARKVIAIKKG  
QYAMEHPPEEAADILIKNAPELKEKRDVIESQKYSKEYASDKEKWGQFDAARWNAFYKWDKENGILKEDLTDKGFTNEFVKZ

(SEQ. ID. NO. 5)

MKRTWRNSFVTLNTPFMIGNIEIPNRTVLAPMAGVTNSAFRTIAKELGAGLVMMEMVSDKGIQYNNKTLHMLHIDEGENPVS  
QLFGSDEDSLARAEEFIQENTKTDIVDINMGCPVKNIVAKNEAGAMWLKDPDKIYSIINKVQSVLDIPLTVKMRTGWADPSLAVENA  
LAAEAAGVSLAMHGRTRQMYTGHADLETLYKVAQALTKIPFIANGDIRTVQEAQRIEEVGADAVMGRHAMGNPNVFNQIN  
HYFTEILPDLTFEDKMKIAYEHLKRLINLKGENVAVREFRGLAPHYLRGTSGAAKLRGAISQASTLAEIETLLQLEKAZ

(SEQ. ID. NO. 6)

MIKNPKLLTKSFLRSFAILGGVGLVHIAIYLTFFYYIQLEGEKFNESARVFTYELKTKTSDEIPSLLQSYSKSLTISAHLKRDIVDKR  
LPLVHDLDIKDGKLSNYIVMLDMSVSTADGKQVTVQFVHGVVDVYKEAKNILLLYLPYTFVLTIAFSFVFSYFYTKRLLNPLFYISEV  
TSKMQLDDNIRFDESRLKDEVGEVGKQINGMYEHLKVIYELESRNEQIVKLQNKQVSVFVGASHELKTPLASLRIILENMQHNG  
DYKDHPIKYIAKSINKIDQMSHLLLEEVLESSKFQEWTECRETTVKPVLDILSRVQELAHSIGVTIENQLTDATRVVMSLRALDKVLT  
NLISNAIKYSKNGRVIIEQDGYLSIKNTCAPLSDQELEHLFDIFYHSQVTDKDESSGLGLYIVNNILESYQMDYSFLPYEHGMEFK  
ISLZ

(SEQ. ID. NO. 7)

MYLGDLMEKAECGQSILSFLQESQTTVKAVMEETGFSKATLTKYVTLNDKALDSGLELAHSEDENRLSIGAATKGRDIRSLF  
LESVYKYLQVLYLLYHQFLAHQLAQELVISEATLGRHLAQLNQLSEFDLSIQNGRWGPEHQIHYFYFCLFRKVVSSQEWEGHM  
QKPERKQEIANLEEICGASLSAGQKLDLVLAHISQQRRLVNACQFQVIEEKMGRGYFDNIFYRLRLKVPFSFAGQHIPLGVEDGE  
MMIFFSLLSHRILPLHTMEYILGFGGQLADLLTQLIQEMKKEELLGDYTEDHVTYELSQLCAQVYLYKGYILQDQYKYQLENRHP  
YLLMEHDFKETAEIIFHALPAFQGGTDLDKKILWEWLQLEIYMAENGQGHMRIGLDLTSGFLVFSRMAAILKRYLEYNRFITIEAY  
DPSRHYDLLVTNNPIHKKEQTPVYYLKNLDLMDLVAIRQLLFTZ

(SEQ. ID. NO. 8)

MEFSKKTRELSIKKMQERTLDLLIIGGGITGAGVALQAAAASGLETGLIEMQDFAEGTSSRSTKL VHGGRLYLYKQFDVEVVSDTVSE  
RAVVQQIAPHIPKSDPMLLPVYDEDGATFSLFRLKVAMDLYDLAGVSNTPAANKVLSKDQVLERQPNLKKEGLVGGGVYLDFR

NNDARLVNIENIKRANQD GALIANHVKAEGFLFDES GKITGVVARDLLTDQVFEIKARLVINTTGPWSDKVRNLSNKGTFQFSQMRPT  
KGVHLVVDSSKIKVSQPVYFDTGLGDGRMVVFLPRENKTYFGTTDDTYTGDLEHPKVTOEDVDYLLGIVNNRFPESNITIDDISS  
WAGLRPLIAGNSASDYNGGNNGTISDESFDNLIATVESYLSKEKTREDVESAVSKLESSTSEKHLDPASVSRGSSLDLDRDDNGLLTLA  
GGKITDYRKMAEGAMERVVDILKAEFDRSFKLINSKTYPVSGGELNPANVDSEIEAFAQLGVSRGLDSKEAHYLANLYGSNAPKV  
FALAHSLEQAPGLSLADTSLHYAMRNELTSPVDFLLRRTNHMLFMRDSDLSIVEPILDEMGRFYDWTEEEKATYRADVEAALA  
NNDLAE LKNZ

(SEQ. ID. NO. 9)

MMNELFGEFLGTLILLLGNGVAVGVLPKTKSNSSGWIVITMGWGIAVAVAVFVSGKLSPAYLNPVAVTIGVALKGGPLWASVLP  
YILAQFAGAMLGQILVWLQFKPHYEAENAGNILATFSTGPAIKD TVSNLISEILGT FVLVLTIFALGLYDFQAGIGTFAVGTLIVGIG  
LSLGGTTGYALNPARDLGRIMHSILPIPNKGDGDSYAWIPVVG PVIGAALAVLVFSLFZ

(SEQ. ID. NO. 10)

MTKKKIERISVIHREKILWLKWFYFMRDKEQPKYSVLERKMFDAAKNQDMLAYQKYATIKQITDIRVQTSEADILEAVKEVYVYNH  
MNVIGACQRLIFISQSPAYDKLNKWFNIYS DLYFSVVPLPKMGVYHEMVGIZ

(SEQ. ID. NO. 11)

MKNSNEAEMKLLYTDIRTSLEILTREAELVAAGKRVFYIAPNSLSFEKERA VLEYLSQQASFSITVTRFAQMARYLVNLDPAKT  
TLDDIGLGLAFYKCLAE LDPKDLRVYGAIKQDPQLIQQLIELYHEMTKSQMSFLDLENLTDEDKRADLLIFEKVTA YLNQGGQLAQ  
ESQLSHLIEAIENDKVSSDFNQIALVIDGFTRFSAEEER VVDLLHGKGVEIVIGAYASKKAYTSPFSEGNLYQASVKFLHHLASKYQT  
PAQDCSQTHEKMDSFDKASRLLESSYDFSELALDVDEKDRENQIWSCLTQKEELEVARSIRQKLHENS DLSYKHFRILLGDVAS  
YQLSLKTIFDQYQIPFYLGRSEAMAHPLTQFVESILALKRYRFRQEDLINLLRTDLYTDL SQSDIDAFEQYIRYLGINGLPAFQQTFT  
KSHHGKFNLERLNLRLRILAPLETLFASRKQKAEKLLQKWSVFLKEGAVTKQLQDLTTTLEAVEQERQAEVWKAFCHVLEQFAT  
VFAGSQVSLEDFLALLHSGMSLSQYRTIPATVDTVLVQSYDLIAPLTADFYVY AIGLTQDNLPKISQNTSLLTDEERQNLNQATEEGV  
QLLIASSENKKNRYTMLS LVNSARKQLFLSAPSLFNESESKESAYLQELIHFGFRREKRMNHKGLSKEDMGSYHSLSSLVAYH  
QQGEMSDTEQDLTFYKVLSRVIGKKLDQQGLENPAIPTSPSSKTLAKDTLQALYPAKQEFYLS TSGLTEFYRNEYSYFLRYVLGLQ  
EELRLHPDARSHGNFLHRIFERALQLPNEDSFDQRLEQAIQETSQEREFEAIYQESLEAQFTKEVLDDVARTTGHLRHNPAIETIKEE  
ANFGGKQDQAFIQLDNGRSVFVRGKVDRIDRLKANGAIGVVDYKSSLTQFQFPHFNGLSQLPTYLAALKREGEQNFFGAMYLEM  
AEPVQSLMAVKS LAGAVVEASKSMKYQGLFLEKESSYLGEFYNNKANQLTDEEFQLLLDYNAYLYKKA AEKILAGRFAINPYT  
ENGRSIAPYVQHQAITGFEANYHLGQARFLEKLDLADGKRLVGEKLLQAWLEKIREELNRZ

(SEQ. ID. NO. 12)

MKLIPFLSEEEIQKLQEA EANSSEKQKKTAEQIEAIYTS AQNILVSASAGSGKTFVMAERILDQLARGVEISQLFISTFTVKAATELKE  
RLEKKISKKIQETDDVDLQKHLGRQLADLPNAAIGTMSDFTQKFLGKHGYLLDIAPNFRILQNQSEQLILENEVFHEVF EAHYQGK  
QKETFSHLLKNFAGRGKDERGLRQQVYKIYDFLQSTSNPQKWLSSEFLKGFEKADFTSEKEKLTQEQIKALWDLESFFRYHLDND  
AKEFAKAA YLENVQLILDEIGSLNQESDSQAYQAVLARVVAISKEKNRALTNASRKADLPLADAYNEERKTQFAKLQGLSDQI  
AILDYQERYHGD TWKLA KTFQSFMSDFVEAYRQRKRQENAFEFADISHYTI EILENFPQVRESYQERFHEVMVDEYQDTNHIQER  
MLELLSNGHNRFMVGDIKQSIYRFRQADPQIFNEKFQRYAQNPQEGRLIILKENFRSSSEVLSATNDVFERLMDQEVGEINYDNKH  
QLVFANTKLT PNPNDKAAFLYDKDDTGEEESQTETKLTGEMRLVIKEILKLHQEKGVAFKEIALLTSSRSRNDQILLALSEYGIP  
VKTDGEQNNYLQSLLEVQVMLD TLRVIHNPLQDYALVALMKSPMFGFDEDELARLSLQKAEDKVHENLYEKL VNAQKMASSQKG  
LIHTALAEK LKQFMDILASWRLYAKTHSLYDLIWKIYNDRFYDYV GALPNGPARQANLYALALRADQFEKSNFKGLSRFIRMID  
QVLEAQHDLASVAVAPPKDAVELMTIHKSKGLEFPYVFILNMDQDFNKQDSMSEVILSRQNGLG VKYIAKMETGAVEDHYPKTIK  
LSIPSLTYRQNEELQLASYSEQMRLLYVAMTRA EKKLYLVGKGSREKLESKEYPAAKNGKLSNTR LQARNFQDWLWAIKSVFT  
KDKLNFYSYRFIGEDQLTREAI GELETKSP LQDSSQADNRQSDTIKEALEMLKEVEVYNTLHRAAIELPSVQTPSQIKKFYEPVMDME  
GVEIAGQGQSVGKKISFDLPDFSTKEKVTGAEIGSATHELMQRIDLSQQLTLASLTETLKVQVQTSQAVRDKINLDKILAFFD TVLGQ  
EILANTDHL YREQPFSMLKRDQKSQEDFVVRGILDGYLLYENKIVLFDYKTD RYDEPSQLVDRYRQGLALYEEALSRAYSIENIEK  
YLILLGKDEVQVVKVZ

(SEQ. ID. NO. 13)

MELARHAESLGVD AIAITIPPIYFRLPEYSVAKYWN DISSAAPNTDYVIYNIPQLAGVALTPSLYTEMLKNPRVIGVKNSSMPVQDIQ  
TFVSLGGEDHIVFNGPDEQFLGGRLMGARAGIGGTYGAMPFLKLNQLIADKDLETARELQYAINAIIGKLTSAHGNMYGVIKEV  
LKINEGLNIGSVRSPLTPVTEEDRPVVEAAAALIRETKERFLZ

(SEQ. ID. NO. 14)

MYKTKCLREKLVFLKIFFPILYQFANYAS FVDTAMTGQYNTMDLAGVSMATSIWNPFFTFLT GIVSALVPIIGHHLGRGKKEEV  
ASDFYQFIYALGLSVVLLGMVFLAPIILNHIGLEAAVAVAVRYLWFLSIGIPLLLFSVIRSLD SLGLTKLSMYLMLLLLPLNSG  
FNYLLIYGAGVP ELGGAGAGLGTSLAYWVLLGISVLVLFKQEKALHLEKRIPLNMDKIKEGVRLGLPIGGTVFAEVAIFS VVGL  
IMAKFSP LIIASHQSAMNFSSLMYAFPMSSISAMAI VVSVEYGAKRFDDAKTYIGLGRWTALIFA AFTLTFLYIFRGNVASLYGNDP  
KFIDLTVRFLTYSLFFQLADTFAAPLQGILRGYKDTVIPFYLGLLGYWGVAIPVYAI Z

(SEQ. ID. NO. 15)

MSTLAKIEALLFVAGEDGIRVRQLAELLSLPPTGIQQSLGKLAQKYEKDPDSSLAL IETSGAYRLVTKPQFAEILKEYSKAPINQSL  
RAALETLSIIAYKQPITRIEIDAIRGVNSSGALAKLQAFDLIKEDGKKEVLGRPNLYVTTDYFLDYMGINHLEELPVIDELEIQAQESQ  
LFGERIEEDENQZ

(SEQ. ID. NO. 16)

MDTMISRFFRHLFEALKSLKRNGWMTVA AVSSVMITLTLVAIFASVIFNTAKLATDIENNVRVVVYIRKDVEDNSQTIEKEGQTVT  
NNDYHKVYDSLKNMSTVKSVTFSSKEEQYEKLT EIMGDNWKIFEGDANPLYDAYIVEANTPNDVK TIAEDAKKIEGVSEVQDGG  
ANTERLFKLASFIRVWGLGIAALLIFIAVFLISNTIRIT IIRSREIQIMRLVGAKNSYIRGPFLLEGAFIGLLGAIAPSVLVFIVYQIVYQS  
VNKSLVGQNLMSISPD LFSPLMIALLFVIGVFIGSLGSGISMRRFLKIZ

(SEQ. ID. NO. 17)

MKKVRIFLALLFFLASPEGAMASDGTWQKGKYLKEDGSQAANEWVFDTHYQSWFYIKADANYAENEWLKQGDDYFYLKSGG  
YMAKSEWVEDKGAFFYLLDQDGKMKRNAWVGTSYVGATGAKVIEDWVYDSQYDAWFIKADGQHAKEWLOKIGKDYFKS  
GGYLLTSQWINQAYYNASGAKVQQGWLFQKQYQSWFYIKENGNYADKEWIFENGHYLLKSGGYMAANEWIWDKESWFIK  
FDGKMAEKWVYDSDSHSAWYFYKSGGYMTANEWIWDKESWFIKSDGKIAEKWVYDSDSHSAWYFYKSGGYMTANEWIWD  
KESWFIKSDGKIAEKWVYDSDSHSAWYFYKSGGYMAKNETVDGYQLGSDGKWLGGKTTNENAAAYQVVPVTANVYDSDGE  
KLSYISQGSVVWLDKDRKSDDKRLAITISGLSGYMKTEDLQALDASKDFIPYYESDGHRYHYVAQNASIPVASHLSDEMGVKKY  
YSADGLHFDGFKLENPFLFKDLTEATNYSAEELDKVFSLLNINNSLLENKGAFTKEAEEHYHINALYLLAHSALSNWGRSKIAKD  
KNNFFGITAYDTPYLSAKTFDDVDKGILGATKWIKENYIDRGRFTLGNKASGMNVEYASDPYWGKIASVMMKINEKLGGKZ

(SEQ. ID. NO. 18)

MKKVLQKYAWAFVVIPLLLQAIFFYVPMFQGAFFYSFTNWTGLTYNYKFVGLNNFKLLFMDPKFMNAIGFTAIHAIAMVVGEIAL  
GIFARVLNSKIKGQTFFRWFFFAVLSGLTVALIFKQVFNYGLPAIGNALHIEFFQTSLLGKWKGAIFAFAVFLWQGVAMPIIFL  
AGLQSIPTTEITAARIDGATSKQVFWNIELPYLLPSVSMVFILALKGGLTAFDQVFAMTGGGPNNATTSLGGLVYNYAFKNNQFGY  
ANAIIVLFFLIVVISIQLRVSKKFEIZ

(SEQ. ID. NO. 19)

MMKQDERKALIGKYILLILGSVLILVPLLATLFSSFKPTKDIDVNFDFGFTNFTWDFNFRLLADGIGGYWNSVVTIVLSLLAVMIFIP  
MAAYSARNMSKRKAFTIMYTLLILGIFVFPQVIMIPITVMMSKLGLANTFGLILLYLYAIPQTLFLYVGYIKISIPESLDEAAEIDGA  
NQFTTYFRIIFPMMKPMHATTMIINALWFWNDFMLPLLVLNRDSKMWTPLPLFYQNYAGQYFNDYGPSFASYVVGIIISITIVLYFFQ  
RHIISGMSNGAVKZ

(SEQ. ID. NO. 20)

MKSILQKMGEHMLLLFLSYSTVISILAQNWMLVASVGMFLFTIFFLHYQSILSHKFFRLILQFVLFGSVLSAAAFASLEHFQIVKKF  
NYAFLSPNMQVWHQNAEVTFFNPNNYGIICFCIMIAFYLTFTTKLNLWKVFCVIAGFVNLFGNFTQNRATAFPAIIAGAIHLYFTTI  
KNWKAFLWSIGVFAIGLSFLFSSDLGVRMTGLDSSMEERISWDAGMALFKQNPFWGEGPLTYMNSYPRHAPYHEHAHSYIDTI  
LSYGIVGTILLVLSSVAPVRLMMDMSQESGKRPIIGLYLSFLTVVAHGFIDLALFWIQSGFIFLLVMCSIPLEHRMLVSDMTDZ

(SEQ. ID. NO. 21)

MSKMDVQKIIAPMMKFVNMRGIIALKDGMALPLTVVGSFLIMGQLPFEGLNKSIASVFGANWTEPFMQVYSGTFAIMGLISCFS  
IAYSIAKNSGVEALPAGVLSVAFFILLRSSYIPKQGEAIGDAISKVWFGGQGIIGAIHGLVVGSIYTTFFIKRKIVIKMPEQVPOAIAKQ  
FEAMIPAFVIFLSSMIVYILAKSLTNGGTFIEMIYSAIQVPLQGLTGSLYGAIGIAFFISFLWWFGVHGQSVVNGVVTALLSNLDAN  
KAMLASANLSLENGAHIVTQQFLDSFLILSGSGITFGLVVAAMLFAAKSKQYQALGKVAFAFPAIFNVNEPVVFGFPIVMNPVMFVPI  
LVPVLAIVIVYGAIAATGFMQPFSGVTLWPSTPAILSGFLVGGWQGVITQLVILAMSTLVYFPFFKVQDRLAYQNEIKQSZ

(SEQ. ID. NO. 22)

MKKKDLVDQLVSEIETGKVRTLGIYGHGASGKSTFAQELYQALDSTTVNLTDPYITSGRHLVVPKDAPNQKV TASLPVAHELES  
LQRDILACRRVWMSZ

(SEQ. ID. NO. 23)

MKKRYLVLTALLALSAAACSQEKTKNEDGETKTEQTAADGTGVSQSQAQAQKKAEEVNVKGDYYSIQGKYDEIIVANKHYPLSK  
DYNPGENPTAKAELVKLIKAMQEAGFISDHYSGFRSYETQTKLYQDYVNQDGKAAADRY SARPGYSEHQTGLAFDVGTDGDL  
VTEKAAQWLLDHAADYGFVVRYLKGKEKETGYMAEEWHLRYVGKEAKEIASGLSLEEYGFEGGDYVDZ

(SEQ. ID. NO. 24)

MREPDFLNHFLKKGYFKKHAKAVLALSGGLDSMFLFKVLSTYQKELEIELILAHVNHKQRIESDWEKEKRLAAEAELPIYISNFS  
GEFSEARARNFRYDFFQEVMMKKTGATALVTAHHADDQVETIFMRLIRGTRRLYLSGIEKQVVGIEIIRPFLHFQKQDFPSIFHED  
TSNQENHYFRNRIRNSYLPELEKENPRFRDAILGIGNEILDYDLAIAELSNNINVEDLQQLFSYSESTQVLLQTYLNRFPDLNLTKA  
QFAEVQQLKSKSQYRHPKNGYELIKEYQQFQICKISPADEKEDELVLHYQNVQVAYQGYLFSFGLPLEGELIQIPVSRETSIHIRH  
RKTGDVLIKNGHRKKLRLFLIDLKIPMEKRNSALHIEQFGEIVSILGIATNNLSKKTNDIMNTVLYIEKIDRZ

(SEQ. ID. NO. 25)

MRKFLIILLPFLTISKVVSTEKEVVYTSKEIYLSQSDFGIYFREKLSSPMVYGEVPVYANEDLVVESGKLTPKTSFQITEWRLNK  
QGIPVFKLSNHQFIAADKRLYDQSEVTPTIKKVWLESDFKLYNSPYDLKEVKSSLSAYSQVSDKTMFVEGREFLHIDQAGWVAK  
ESTSEEDNRMSKVQEMLSEKYQKDSFSIYVKQLTTGKEAGINQDEKMYAASVLKLSYLYYTQEKINEGLYQLDITVYKVSANVDF  
PGSYKPEGSGSLPKKEDNKEYSLKDLITKVSKESDNVAHNLLGYISNQSDATFKSKMSAIMGDDWDPKEKLISKMAKGFMEAI  
YNQNGFVLESITKTDQFDSQRIAGVSVKVAHKIGDADEFKHDGTGVVYADSPFILSIFTKNSDYDTISKIAKDVEYEVKZ

(SEQ. ID. NO. 26)

MKKQNNGLIKNPFLWLLFIFFLVTGFQYFYSNNSSGGSQQINYTELVEITDGNVKELTYQPNGSVIEVSGVYKNPKTSKEETGIQF  
FTPSVTKVEKFTSTILPADTTVSELQKLATDHKAETVTKHESSSGIWINLLVSVIPFGILFFFLFSMMGMNMGCGNRPMSFGRSKA  
KAANKEDIKVRFSVAGAEEEKQELVEVVEFLKDPKRFTKLGARIPAGVLLGPPGTGKTLLAKAVAGEAGVPFFSISGSDFVEMF  
VGVGASRVRSLEDAKKAAPAIIFIDEIDAVGRQRGVGLGGGNDEREQTLNQLLIEMDGFEGNEGIIIVAAATNRSDVLDLPALLRGR  
FDRKVLVGRPDVKGREAILKVHAKNKPLAEDVDLKLVAQQTGPGVADLENVLEAALVAARRNKSIIHDSIDEAEDRVIAGPS  
KKDKTVSQKERELVAYHEAGHTIVGLVLSNARVVHKVTIYPRGAGGYMIALPKEDQMLLSKEDMKEQLAGLMGGRVAEEIIFN  
VQTTGASNDFEQATQMARAMVTEYGMSEKLGVPVQYEGNHAMLAGAQPQKSISEQTAYEIDEVRSLLNEARNKAAEIIQSNRETH  
KLIAEALLKYETLDSTQIKALYETGKMPEAVEESHALSDEVKSKMNDKZ

(SEQ. ID. NO. 27)

MKRSSLLVRMVISIFLVFLILLALVGTFFYQSSSAIEATIEGNSQTTISQTSHFQSYIKKLETTSTGLTQQTDLVAYAEENPSQDKVEG  
IRDLFILTKSDKDLKTVVLVTKSGQVISTDDSVQMKTSDDMAEDWYQKAIHQGAMPVLTARKSDSQWVISVTQELVDAKGA  
NLGVLRLDISYETLEAYLNQLQLGQGFIFIENHEFVYHPQHTVYSSSSKMEAMKPYIDTGGQYTPGHKSYVSQEKIAGTDWTV  
LGVSLEKLDQVRSQLLWTLGASVTSLLVCLLVWFSKRWIAPLKDRLRETMLLEIASGAQNLRAKEVGAYELREVTRQFNAML  
QIDQLMVAIRSQEETTRQYQLQALSSQINPHFLYNTLDTIWMAEFHDSQRVVQVTKSLATYFRLALNQGDCLISDEINHVRQYL

FIQKQRYGDKLEYEINENVAFDNLVLPKLVLPQPLVENALYHGIKEKEQGHIKLSVQKQDSGLVIRIEDDGVGFQDAGDSSQSQLK  
RGGVGLQNVQDQRLKLHFGANYHMKIDSRPQKGTKEIYINRIETSZ

(SEQ. ID. NO. 28)

MKRSSLLVRMVISIFLVFLILLALVGTFFYYQSSSSAIEATIEGNSQTTISQTSHFQSYIKKLETTSTGLTQQTDVLA YAENPSQDKVEG  
IRDLFTILKSDKDLKTVLVTKSGQVISTDDSVQMKTSDDMMAEDWYQKAIHQGAMPVLTTPARKSDSQWVISVTQELVDAKGA  
NLGVLRLDISYETLEAYLNQLQLGQGGFAFIINENHEFVYHPQHTVYSSSSKMEAMKPYIDTGGQYTPGHKSYSVQEKIAGTDWTV  
LGVSSLEKLDQVRSQLLWTLGASVTSLLVCLCLVWFSLKRWIAPLKDRLTMEIASGAQNLRAKEVGAYELREVTRQFNAMLD  
QIDQLMVAIRSQEETTRQYQLQALSSQINPHFLYNTLDTIIMWAEFHDSSQRVVQVTKSLATYFRLALNQGKDLICLSEINHVRQYL  
FIQKQRYGDKLEYEINENVAFDNLVLPKLVLPQPLVENALYHGIKEKEQGHIKLSVQKQDSGLVIRIEDDGVGFQDAGDSSQSQLK  
RGGVGLQNVQDQRLKLHFGANYHMKIDSRPQKGTKEIYINRIETSZ

(SEQ. ID. NO. 29)

MFFKLLREALKVQKVRSKILFTIFIVLVFRIGTSITVPGVNANSLNALSGLSFLNMLSLSVSGNALKNFSIFALGVSPYITASIVVQLLQ  
MDILPKFVWGKQGEVGRKLNQATRYIALVLAFAVQSIGITAGFNTLAGAQLIKTALTQPQVLTIGIHLTAGSMIVTWLGEQITDKG  
YNGVSMIIFAGVSSIPEMIQGIYVDYFVNVPSSRITSSIIIFVILIITVLLIYFTTYVQQAQYKIPIQYTKVAQAGAPSSSYLPLKVNPAQ  
VIPVIFASSITAAPAAIQLSATGHDWAWVRVAQEMLATTSPGTGIAMYALLIILFTFFYTFVQINPEKAAETYKRVPISMEFVLVK  
VQKNICLNFFVVLQLLVPSSLVZ

(SEQ. ID. NO. 30)

MDIRQVTETIAMIEEQNFDIRTITMGISLLDCIDPDINRAAEKIYQKITTKAANLVAVGDEIAAELGPIVKNRVSVPISLIGAATDAT  
DYVVLAKALDKAAKEIGVDFIGGFSALVQKGYQKGEILINSIPRALAETDKVCSVNIGSTKSGINMTAVADMGRRIKETANLSD  
MGVAKLVVFANAVEDNPFMAGAFHGVGEADVINVGVSPPGVVVRKALEKVRGQSFVVAETVKKTAFAKITRIGQLVGQMASERL  
GVEFGIVDLSLAPTPAVGDSVARVLEEMGLETVGTHGTTAALALLNDQVKKGGVMACNQVGGLSGAFIPVSEDEGMIAAVQNGS  
LNLEKLEAMTAICSVLDMIAIPEDTPAETIAAMIADEAAIGVINMKTTAVRIIPKKEGDMIEFGGLLTAPVMKVNGASSVDFISR  
GGQIPAPIHSFKNZ

(SEQ. ID. NO. 31)

MTQIIDGKALAAKQGLAEKTAKEETGLVPLGVVLVGDNPASQVYVRNKERSALAAGFRSEVVRVPETITQEELDLIAKYN  
QDPAWHGILVQLPLPKHIDEEAVLLAIDPEKDVGDGFHPLNMGRWLSGHPVMPSTPAGIMEMFHEYGIDLEGKNAVVIQRSNVVGK  
PMAQLLLAKNATVTLTHSRTHNLSKVAADKADILVVAIGRAKFVTAADFVKPGAVVIDVGMNRDENGKLCGDVDYEA VAPLASHIT  
PVPGGVGPMTITMLMEQTYQAALRTLDRKZ

(SEQ. ID. NO. 32)

MSKFNRHILVVLDSVGIGAAPDANNFVNAGVPDGDASDTLGHISKTVGLNVPNMAKIGLGNIPRETPLKTVAAESNPTGYATKLEEV  
SLGKDTMTGHWIEMGLNITEPFDTFWNGFPPEILTKEIEFSGRKVIREANKPYSGTAVIYDFGPRQMETGELIYTSADPVLQIAAHE  
DIPLDELYRICEYARSITLERPALLGRHARPYVGEPPGNFRTANRRDLAVSPFFPTVLDKLNAGIDTYAVGKINDIFNGAGINHDM  
GHNKSNSHGIDTLLKTMGLAEFEKGFSTNLVDFDALYGHRRNAHG YRDCLHEFDERLPEIIAAMRENDLLLITADHGNDPTYAG  
TDHTREYIPLLAYSPAFKGNGLIPVGHFADISATVADNFGVETAMIGESFLDKLVZ

(SEQ. ID. NO. 33)

MFISISAGIVTFLTLVEIPAFIQFYRKAQITGQQMHEDVKQHQAAGTPTMGGVLFLITSVLVAFFFALFSSQFSNNVGMILFILVLY  
GLVGFLDDFLKVFVRKINEGLNPKQKLAQLLGGVIFYLYFYERGGDILSVFGYPVHLGFFYIFFALFWLVGFSNAVNLTGVDGLASI  
SVVISLSAYGVIA YVQGMIDILLVILAMIGLLGFFIFHNHAKPVFMGDVGSALGGMALAAISMAHJQEWTLIIIGIVYVFETTSVM  
MQVSYFKLTGGKRIFRMTPVHHHFELGGLSGKGNPWSWKVDFFFWGVGLLASLLTLAILYLMZ

(SEQ. ID. NO. 34)

LFKKNKDILNIALPAMGENFLQMLMGMVDSYLVLAHLGLIAISGVSVAGNIITTYQAIFIALGAAISSVISKSIGQKDQSKLAYHVTEA  
LKITLLLSFLLGFLSIFAGKEMIGLLGTERDVAESGGYLSLVGGGSIVLLGLMTSLGALIRATHNPRPLPYVSFLSNALNIFSSLAIFV  
LDMGIAGVAVGTIVSRVLVGLVILWSQLKLPYKPTFGLDKELLTALPAAGERLMMRAGDVVIAALVVSFGTEAVAGNAIGEVLT  
QFNYPAPFAGVATATVMLLARAVGEDDWKRVASLSKQTFWLSLFLMLPLSFSIYVLGVPLTHLYTTDSLA VEASVLVTLFSLGTP  
MTTGTVIYTA VWQGLGNARLPFYATSIGMWICIRIGTG YLMGIVLWGVLPGI WAGSLDNGFRWFLR YRYQRYMSLKGZ

(SEQ. ID. NO. 35)

MQTQEKHSQA AVLGLQHLLAMYSGSILVPIMIALGYSAEQLTYLISTDIFMCGVATFLQLQLNKYFGIGLPPVLGVAFQSVAPLI  
MIGQSHGSGAMFGALIASGIYVVLVSGIFSKVANLFPISIVTGSVITIGLTLIPVAIGNMGNNVPEPTGQSLLAAITVLIILLINIFTKG  
FIKSISILIGLVGTAAIATMGLVDFSPVA VAPLVHVP TPLYFGMPTFEISSIVMMCIIATVSMVESTGVYALSDITKDPIDSTRLRNG  
YRAEGLAVLLGGIFNTFPYTGFSGQNVGLVKLSGIKKRLPIYYAAGFLVLLGLLPKFGALAQIIPSSVLGGAMLVMFGEVSIQGMQIL  
ARVDFANNEHNFLIAAVSIAAGVGLNNSNLFVSMPTAFQMFFSNGIVVASLLAIVLNAVLNHKKKZ

(SEQ. ID. NO. 36)

MKDRIKEYLQDKGKVTVNDLAQALGKDSSKDFRELKTLISMERKHQIRFEEDGSLTLEIKKKHEITLKGIFHAHKNNGFGFVSLEGE  
EDDLFVKGNDVNYAIDGDTVEVVIKKVADRNGKGTAAEAKIIDILEHSLTTVVGGQIVLDQEKPKYAGYIRSKNQKISQPIYVKKPAL  
KLEGTEVLKVFDIKYPSKKHDFVAVSLDVVGHSTDVGDIDVLELVESMDIVSEFPEAVVKEAESVPDAPSQKDMEGRLDLRDEITF  
TIDGADAKDLDDAVHIKALKNGNLEFGVHIADVSYYVTEGSALDKALNRATSVYVTDVVPMPLPERLSNGICSLNPQVDRLTQS  
AIMEIDKHGRVVNYTITQTVIKTSFRMTYSDVNDILAGDEEKRKEYHKIVSSIELMAKLHETLENMRVKRGALNFDTNEAKILVDK  
QGKPVJIVLRQRGIAERMIESFMLMANETVAEHFSKLDLPFIYRIHEEPKAEKVQKFIDYASSFGLRIYGTASEISQEALQDIMRAVE  
GEPYADVLSMMLLRSMQQARYSEHNHGHYGLAADYYTHFTSPIRRYPDLLVHRMIRDYGRSKEIAEHFEQVIPEIATQSSNRERRA  
IEAEREVEAMKAEYMEEYVGEEDYDAVSSIVKFGFLVELPNTVEGLIHITNLPEFYHFNERDLTLRGEKSGITFRVGGQIRIRVERA  
DKMTGEIDFSFVPSEFDVIEKGLKQSSRSRGRDRSNRRSDKKEDKRKSGRSNDKRKHSQDKKKKKGKPFYKEVAKKGAKHGKG  
RGKGRRTKZ

(SEQ. ID. NO. 37)

MGTGTGTHIDLILIVYLLAVLVAGIYFSKKEMKGKEFFKGDGSPVWYVTSVSIFATMLSPISFLGLAGSSYAGSWILWFAQLGMVV  
AIPLTIRFILPFIARIDIDTAYDYLDKRFNSKALRIISALLFIYQLGRMSIIMYLPASGLSVLTGIDINILILMGVVAIVYSYTGGLKSVL





RLPLENVVFEFEEYQEQSTEAIQAYDRVQADYAGARATTSWSQRLAEQFGQAEPSSSTRKNLEQKLLZMLKLLIAIVGTNSKRSTNR  
QLLQYMQKHFTDKAEIELVEIKAIPVFNKPADKQVPAEILEIAAKIEEADGVIIGTPEYDHSIPAVLMSALAWLSYGIYPLLNKPMIT  
GASYGTLGSSRAQLQLRQILNAPEIKANVLPDEFLLSHSLQAFNPSGDLVDLDVIKKLDAIFDDFRIFVKITEKLRNAQELLRKDAED  
FDWENLZ

(SEQ. ID. NO. 49)

MNTYQLNNGVEIPVLGFGTFKAKDGEEAYRAVLEALKAGYRHIDTAIYQNEESVGQAIKDSGVPREEMFVTTKLWNSQQTYEQ  
TRQALEKSIEKLGLDYLIDYLIHWPNPPLRENDWAKTRNAEVWRAMEDLYQEGKIRAIQVSNFLPHLDALLETATIVPAVNQV  
RLAPGVYQDQVVAYCREKGILLEAWGPFGQGEFDSKQVQEAANHGSVAQIALAWSLAEGFLPLPKSVTTSRIQANLDCFGIEL  
SHEERETLKTIQVQSGAPRVDDVDFZ

(SEQ. ID. NO. 50)

MRCKMLDPIAQLGPLAIRWYALCIVTGLILAVYLTMTKEAPRKKIIPDDILDFILVAFPLAILGARLYYVIFRFDYYSQNLGEIFAOWN  
GGLAIYGGITGALVLYIFADRKLINTWDFLDIAAPSVMAQSLGRWGNFFNQEAYGATVDNLDYLPGFIRDQMYIEGSYRQPTFL  
YESLWNLGFLALIFRRKWKSLRRGHITAFYLIWYGFRMVIEGMRDLSLMMFFGFRVSWLSVVLIGLIMIVYQNRKKAPYYIT  
EENZ

(SEQ. ID. NO. 51)

MGKLSILLGTVSGAALALFLTSDKGKQVCSQAQDFLDDLREDPEYAKEQVCEKLTVEKQATDFVLKTKEQVESGEITVDSILAQ  
TKSYAFQATEASKNQLNNLKEQWQEKAEALDDSEEIVDITEEZ

(SEQ. ID. NO. 52)

MKTKLIFWGSMLFLLSILLSITILAWIFYPMEIQWLNLTNRVYLKPETIQYNFHILMNYLTNPFSQVLQMPDFRSSAAGLHHFAVV  
KNLPHLVQLVALVTLPSFYVFNVRIVKKDFLSLYRKSLLALVVLPMIGLGGVIGFDQFFTLFHQILFVGDDTWLFDPAKDPVIMI  
LPETFFLHAFLLFFALYENFFGYLYLKSRRKZ

(SEQ. ID. NO. 53)

MTYHFTEEYDIIVIGAGHAGVEASLAASRMGCKVLLATINIEMLAFCPCNPISIGSSAKGIVVREVDALGGEMAKTIDKTYIQMKML  
NTGKGPVAVRALRAQADKELYSKEMRKTVENQENLTLRQTMIDEILVEDGKVVGVRTATHQEYAAKAVIVTTGTALRGEIIGDLK  
YSSGPNHSLASINLADNLKELGLEIGRFGTGTTPRVKASSINYDVTEIQPGDEVNHFSTYTSRDEDYVKDQVPCWLTYTNGTSHEIIQ  
NNLHRAPMFTGVVKGVGPRYCPSIEDKIVRFADKERHQLFLEPEGRNTEEVYVQGLSTSLPEDVQDRDLVHSIKGLENAEMMRGTGY  
AIEYDMVLPHQLRATLETKKISGLFTAGQNTGTSYEEAAGQGIAGINAALKIQGKPELILKRSDDGYIGVMIDDLVTKGITIEPYRLL  
TSRAEYRLILRHDNADMRLTEMGREIGLVDDERWARFEIKKNQFDNEMKRLDSIKLKPVKETNAKVEEMGFKPLTDAVTAKEFLR  
RPEVSYQDQVAFIGPAAEDLDDKIIELIETIEIKYEGYISKAMDQVAKMKRMEEKRIPANIDWDDIDSIAEARQKFKLINPETIGQAS  
RISGVNPADISILMVYLEGKNRSISKTLQSKZ

(SEQ. ID. NO. 54)

MTKQVLLVDDEEHILKLLDYHLSKEGFSTQLVTNGRKALALAETEPDFDILLDMLPQLDGMVCKRLRAKGVKTPIMMVSASKS  
EFDKVLALLEGADDYLTKPFSPRELLARVKAVALRRTKGEQEGDDSDNIADDSWLFGLTKVYPERHEVYKANKLLSLTPKEFESDK  
NPFFEVFKVSKVTAQZ

(SEQ. ID. NO. 55)

MTTFKDGFLWGGAVAAHQLEGGWQEGGKGISVADVMTAGRHGVAIREITLVLEGKYYPNHEAIDFYHRYKEDIALFAEMGFKC  
FRTSIAWTRIFPKGDELEPNEEGLQFYDNLFDECLKNGIEPVITLSHFEMPYHLVTEYGGWKNRKLIDFFARFAEVVFKRYKDKVK  
YWMTFNEINNQANYQEDFAPFTNSGIVYEEGDNREAIMYQAAHYELVASARAVKIGHEINPDFQIGCMIAMCPIYPVTCNPKDILM  
AMKAMQKRYFYFADVHVLGKYPEHIFKYWERKGISVDFTAQDKEDLLGGTVDYIGFSYYMSFAIDSHRENNPYFDYLETEDLVKN  
NYVKASEWEWQIDPEGLRYALNWFDTDHYHLPLFIVENGFAGIDQVAADGMVHDDYRIEYLGAIHREMKAUVVEDGVDLMGYTP  
WGCIDLVSAGTGEMRKRYGFIYVDKDDNGKGSYNRSPKKSFGWYKEVISSNGESVEZ

(SEQ. ID. NO. 56)

MDQQNGLFGFLENHVMGPMGKLAQFKVVRITAAGMAAVPFTIVGSMFLVFSILPQAFSFWPIVADIFSASFDFKFTSLYMVANYA  
TMGSLSLYFVLSLAYELTKIYAEELNMNPLNGALLALMAFVMTVPQIIFDGGMMKTVTSLKEGAVIADGWAMGNVVARFGTT  
GIFTAIIAIVTVLIYRMCVKHNWVIKMPAEPVPEGVSRGFTALVPGFVAVFVIFINGLLVAMGTDIFKVIAPFGFVSNLTNSWIGL  
MIYLLTQLLWIVGIHGANIVFAFVSPIALANMAENAAGGHFAVAGEFSNMFVIAGGSGATLGLCLYIAFASKSEQLKAIGRASVVP  
ALFNINEPLIFGLPIIYNPALAIPFILAPMVTATIYYVANSLNFIKPIIAQVPWPPTVGIGAFGLTADLRAVLVALVCAFAAFLVYLPFIR  
VYDQKLKVEEQGIZ

(SEQ. ID. NO. 57)

MKKFYVSPIFPILVGLIAFGVLSTFIHFVNNNLLTVLILFLVGGYVFLFKKLRVHYTRSDVEQIYVNHQAEESLTALLEQMPVGVM  
KLNLSSEGEVWFNPNYAEILTKEDGDFLEAVQTHKASVGNPSTYAKLGEKRYAVHMDASSGVLYFVDVSRQAITDELVTSRPV  
IGIVSDNYDDLEDETSEDISQINSFVANFISEFSEKHMMFSRRVSMDFYLFDTYTVLEGLMNDKFSVIDAFREESKQRQLPLTSL  
MGFSYGDGNHDEIGKVALNLNLAEVRRGGDQVVVKENDETKNPVYFGGSAASIKRTRTRTRAMMTAISDKIRSVDQVVFVGHK  
NLDMDALGSAVGMQLFASNVIENSYALYDEEQMSPDIERAVSFIEKEGVTKLLSVKDAMGMVTNRSLLILVDHSKTALTLSKEYF  
DLFTQTIVIDHRRDQDFPDNAVITYIESGASSASELVTELIFQNSKKNRLSRMQASVLMAGMMLDTKNFTSRVTSRTFDVASYL  
RTRGSDSIAIQAATDFEYREVNELILQGRKLGSDVLIAEAKDMKCYDTVVISKAADAMLAMSGIEASFVLAKNTQGFISISARS  
SKLNVQRIMEELGGGGHFNLAQAQKDVTLSEAGEKLTEIVLNEMKEKEKEEZ

(SEQ. ID. NO. 58)

MKEKNMWKELLNRAGWILVFLAVLLYQVPLVVTSLTLKEVALLQSGILVAGLSIVVLALFIMGARKTKLASFNFSFFRAKDLAR  
LGLSYLVIVGNSILGSILLQLSNETTTANQSQINDMVQNSSLISSFFLLALLAPICEILCRGIVPKKIFRGKENLGFVVGTVFALLHQP  
SNLPSLLIYGGMSTVLSWTAYKTQRLEMSILLHMIVNGIAFCLLALVVMISRTLGISVZ

(SEQ. ID. NO. 59)

MKEKNMWKELLNRAGWILVFLAVLLYQVPLVVTSLTLKEVALLQSGLIVAGLSIVVLALFIMGARKTKLASFNFSFFRAKDLAR  
LGLSYLVIVGNSILGQSILLQLSNETTANQSQINDMVQNSSLISSFFLLALLAPICEILCRGIVPKKIFRGKENLGFVVGTVFALLHQ  
SNLPSLLYGGMSTVLSWTAYKTQRLEMSILLHMIVNGIAFCLLALVVMISRTLGISVZ

(SEQ. ID. NO. 60)

MDTQKIEAAVKMIEAVGEDANREGLQETPARVARMYQEIFSGLGQTAEHLSKSFEIIDDNMVVEKDIFHTMCEHHFLPFYGRA  
HAIYIPDGRVAGLSKLARTVEVYSKKPQIERLNIEVADALMDYLGAKGAFVVEAEHMCMSMRGVRKPGTATLTTVARGLFETD  
KDLRDQAYRLMGLZMKDLFLKQAFRKECLGYLRVYVLDNHFVLLVLLGLFLAYQYSQLLQHFPENHWPIILLFVGITSVLLLLLW  
GGTATYMEAPDKLFLLVGEEIKLHLKRQTGISLVFWLQVTLFLLFAPLFLAMGYGLPVFLLYVLLLVGVGKYFHCQKASKFFT  
ETGLDWDYVISQESKRKQVLLRFFALFTQVKGISNSVKRRAYLDFILKAVQKVPQKIWNLYLRSYLRNGDLFALSRLLLLSLLA  
QVFIEQAWIATAVVVLFNLYLLFQLLALYHAFDYQYLTQLFPLDKGQKEKGLQEVVRGLTSFVLLVELLVGLITFQEKALLALLG  
AGLVLLVLYLPYQVQRQMQDZ

(SEQ. ID. NO. 61)

MRKSIVLAADNAYLIPLLETTIKSVLYHNRDVDFYILNSDIAPEWFKLLGRKMEVNVNSTIRSVHIDKELFESYKTGPHINYASYFRFFA  
TEVVESDRVLYLDSDIIVTGELATLFEIDLKGYSIGAVDDVYAYEGRKSGFNTGMLLMDVAKWKEHSIVNSLLELAAEQNQVVHL  
GDQSIILNIYFEDNWLALDKTYNMYVGIDYHLAQECERLDDNPPTIVHYASHDKPWNTYSISRLRELWWVYRDLDWSEIAFQRSD  
LNYFERSNQSKQVMLVTSADIKHLEYLVQRLPDWHFHLAAPCDCSEELTSLSQYTNVTYQNVLHSRIDWLLDDSIYVLDINT  
GGEVFNVTTRAQESGKKIFAFDITRKSMDDGLYDGIFSVRPPDDLVRMKNIEIEZ

(SEQ. ID. NO. 62)

MTKIYSSIAVKKGLFTSFLFIYVLGSRILPFVDLNTKDFLGGSTAYLAFSAALTGGNLRSLSIFSGLSPWMSAMILWQMFSFSKRL  
GLTSTSIEIQDRRKMYLTLLIAVQLSLAVSLRPLVQSSYSAILVVLMTILLIAGTFFLVWLSDLNASMGIGGSIVILLSSMVLNIPQDV  
LETFTQTVHIPTGIIVLLALLTLVFSYLLALMYRARYLVPVNKIGLHNRKFRYSYLEIMLNPAGGMPYMYVMSFSLVPAYLFILLGFIF  
PNHSGLAALSKEFMVGKPLWVYVYISVLFSLFIIFAFVTMNGEEIADRMKKSGEYIYGIYPGADTSRFINRLVLRFSVIGGLFNVIMA  
GGPMLFVLDFEKLRLAMIPGLFMMFGMIFTIRDEVKALRLNETYRPLIZ

(SEQ. ID. NO. 63)

MSSLSDDQELVAKTVEFRQLSEGESLDDILVEAFVREADKRILGMFPYDVQVMGAIVMHYGNVAEMNTGEGKTLTATMPVYL  
NAFSGEGVMVVTNPEYLSKRDAEEMGQVYRFLGLTIGVPFTEDPKKEMKAEKKLIYASDIYTTNSNLGFDYLDNLDNASNEEGKF  
LRPFNYVIIDEIDILLDSAQTPLIAGSPRVQSNYYAIIDTLVTTLVEGEDYIFKEEKEEVWLTTKGAKSAENFLGIDNLYKEEHASF  
ARHLVYAIRAHKLFTKDKDYIIRGNEMVLVDKGTGRLMEMTKLQGGHLQAIEAKEHVKLSPETRAMASITYQSLFKMFNKISGMT  
GTGKVAEKEFIETYNMSVVRIPTRNRPRQRIDYPDNLITLPEKVYASLEYIKQYHAKGNPLLVFVGSVEMSQLYSSLLFREGIAHNV  
LNANNAAREAQIIESGQMGAVTVATSMAGRGTDIKLGKVAELGGLIVIGTERMESQRIDLQIRGRSGRQGDGPGMSKFFVSLEDD  
VIKKFGPSWVHKYKDYQVQDMTQPEVLKGRKYRKLVEKAQHASDSAGRSARRQTLLEYAESMNIQRDIVYKERNRLIDGSRDLE  
DVVVDIERYTEEVAADHYASRELLFHIVTNISFHVKEVPDYIDVTDKTAVRSMKQVIDKELSEKELLNQHDLEQFLRLSLK  
ADDNWEQVQDYQLQLSMAIGGQSASQKNPIVEYYQEAYAGFEAMKEQIHADMVRNLLMGLVEVTPKGEIVTHFPZ

(SEQ. ID. NO. 64)

MIGTFAAALVAVLANFVPIEITPNSANTEIAPPDGIGQVLSNLLKLVDNPNVALLTANYIRILSWAVIFGIAMREASKNSQELLKTI  
ADVTSKIVEWIINLAPFGILGLVFKTISDKGVGSLANYGILLVLLVTMLFVAPVNPPLIAFFMRRNPYPLVWNCRLRVSGVTAFFTR  
SSATNIPVNMKLCHDLGLNPDTYSVSIPLGSTINMAGVAITINLLTLAAVNTLGIPVDFATAFVLSVVAIAISSCDASGIAGGSLLIPV  
ACSLFGISNDIAIQIVGVGVFVIGVQDSCETALNSSTDVLTFAVAEYAATRKKZ

(SEQ. ID. NO. 65)

MSISQRTTKLILATCLLAYFLNLSSAVSAGIALLSLSDTRRSTLKLARNRFLSMALLAIGVLAFLHLSGFIHWSLGLYLAFYVPL  
AYKMGWEIGITPSTVLVSHLLVQUESTSPDLLVNEFLLFAIGTGFAALLVNLMPSEEEIQHYHTLVEEKLKDILQRFKYLSRGDGR  
NRAQLVAELDTLLKEALRLVYLDHSDHLFHQTDYHIHYFEMRQRQSRILRNMAQQINTCHLAASESLILAQLFSKIAQQLSQTNPA  
SDDLDEIERYLEVFRNRSLPKTREEFETRATLLQLLREAKTFIQVKVDYFYQYRQZ

(SEQ. ID. NO. 66)

MEIMSLAIAFVAVIIGLVIGYVSISAKMKSSQEAELMLLNAEQEATNLRGQAEREADLLVNEAKRESKSLKKEALLEAKEEARKY  
REEVDAEFKSERQELKQIESRLTERATSLDRKDDNLTSKEQTLEQEQSISDRAKNLDAREEQLEEVERQKEAELERIGALSQAEAR  
DIILAQTEENLTREIASRIEAEQEVKERSDKMAKDILVQAMQRIAGEYVAESTNSTVHLPDDTMKGRIIGREGNRNRTFESLTGVDV  
IIDDTPEVVTLSGFDPRIEARMTEMLLKDGRIHPARIEELVEKNRQEIENKIREYGEAAAIEGAPNLHPDLMKIMGRQLQFRTSY  
GQNVLRHSIEVAKLAGIMASELGENAALARRAGFLHDIGKAIHVEVESHVEIGMELARKYKEPPVVNTIASHHGDVEAESVIAV  
IVAAADALSAARPGARSESLESYIKRLHDLLEEIANGFEGVQTSFALQAGREIRIMVNPQKIKDDKVITLAHKVRKKIENNLDPGNI  
KVTVIRELRAVDYAKZ

(SEQ. ID. NO. 67)

MMLKPSIDTLDDKVPKSLVILEAKRAHELEAGAPATQGFKEKSTLRALIEIESGNVTIHPDPEGKREAVRRRIIEEKRRKEEEEK  
KIKEQIAKEKEDGEKIZ

(SEQ. ID. NO. 68)

MSAYQLPTVWQDEASNQGAFTGLNRPTAGARFEQNLPKGEQAFQLYSLGTPNGVKVTILLEELLEAGFKEAAYDLYKIAMDGDGQ  
FGSDFVKLPNSKIPALLDQSGTENVRVFESAHILLYLAEKFGAFLPSNPVEKVEVLNWLFWQAGAAPFLGGGFGHFFNYAPEKLE  
YPINRFTMEVQRQLDLDKELAQKPYIAGNDYTIADIAIWSWYQQLVQGNLYQGSAKFLDASSYQNLVKWAEKIANRPAVKRGL  
EVTYTEIKZ

(SEQ. ID. NO. 69)

LASLITSIMFYVGFDVLRDTIQKILSREETVIDPLGATLGIISAAIMFVVYLYNTRLSKKSNSNALKAAAKDNLSDAVTSLGTAIAILA  
SSFNYPIVDKLVIAIITFFILKTAAYDIFIESSFLSDGFDRLLEDYQKAIMEIPKISKVKSQRGRITYGSNIYLDITLEMNPDLVSFESHEI  
ADQVESMLEERFGVFDTDVHIEPAPIPEDEILDNVYKLLMREQLIDQGNQLEELLTDFFVYIRQDGEQMDKEAYKTKKELNSAIK  
DIQITSISQKTKLICYELDGIHTSIWRRHETWQNIFHQETKKEZ

(SEQ. ID. NO. 70)

MTIKLVATDMGDTFLDGNRFDMDRLKSLLSYKEKGIYFAVASGRGFLSLEKLFAGVRDDIIFIAENGLSVEYQQQDLYEATMS  
RDFYLATFEKLKTSYVVDINKLLLTKGKGSYVLDTVDETYLKVSQHYNENIQKVASLEDITDDIFKFTTNFTEETLEDGEAWVNN  
VPGVKAMTTGFEISIDIVLDYVDKGVAIVELVKKLGITMDQVMAFGDNLNDLHMMQVVGHPVAPENARPEILELAKTVIGHHKKER  
SVIAYMEGLZ

(SEQ. ID. NO. 71)

MADIKLIALDLDTLLTDDKRLTDRTKETLQAARDRGIKVVLTTGRPLKAMDFFLHELGTGQDEYITITFNGGLVQKNTGEILDK  
TVFSYDDVARLYEETEKLSPLDAISEGTVYQIQSDQESLYAKFNPALTFVPVDFEDLSSQMTYNKCVTAFAQEPLDAAIQKISPELF  
DQYEIFKSREMILLEWSPKNVHKATGLAKLISHLGIDQSQVMACGDEANDLSMIEWAGLGVA MQNAVPEVKAAANVVTMTNDE  
EAVAWAIEEYVLKENZ

(SEQ. ID. NO. 72)

MESLILLILLIANLAGFLIWQRQDRQEKHLSKSLDQADHLSQDLDRFDQARQASQLDQKLEVVVSDRLQEVRIELHQGLTQV  
RQEMTDNLLQTRDKTDQRLQALQESNEQRLEQMRQTVEEKLEKTLQTRLQASFETVSKQLESVNRGLGEMQTVARDVGALNKV  
LSGTRKTRGILGELQLGQIIEDIMTPAQYEREYATVENSSERVEYAIKLPQGQDQEVYVLPIDSKFPLADYYRLEEAYETGDKDEIERC  
RKSLLASVKRFARDIRNKYIAPRRTTNFGVLFVPTGELYSEIVRNPVFFDRLREEQIIVAGPSTLSALLNSLVGFKTLNIQKSADHIS  
KTLASVKTEFGKFGGILVKAQKHLQHASGNIDELLNRRITAIERTLRHIELSEGEPAIDLLHFQENEEYEDZ

(SEQ. ID. NO. 73)

MKISHMKKDELFEFGFYLIKSADLRQTRAGKNYLAFTFQDDSGEIDGKLWDAQPHNIEAFTAGKVHMKGRREVYNNTQVQNQIT  
LRLPQAGEPNPADFKVKSPVDVKEIRDYMSQMIFKIENPVWQRIVRNLYTKYDKEFYSYPAAKTNHHAFETGLAYHTATMVRL  
ADAISEVYPQLNKSLLYAGIMLHDLAKVIELTGPDQTEYTVRGNLLGHIALIDSEITKTMELGIDDTKEEVVLLRHVILSHHGLLE  
YGSPPVRPRIMEAIIHMDNLDASMMMSTALALVDKGEMTNKIFAMDNRSFYKPDLDZ

(SEQ. ID. NO. 74)

MSEKAKKGFKMPSSYTVLLIIIAIMAVLTWFIPAGAFIEGIYETQPNPQGIWDVLMAPIRAMLGTHPEEGSLIKETSAADIVAFFILM  
VGGFLGIVNKTGALDVGIAISIVKKYKGREKMLILVLMPLFALGGTTYGMGEETMAFYPLLVPVMMAVGFDLSLTGVAIILLGSQIGC  
LASTLNPFATGIASATAGVGTGDGIVRLIFWVTLTALSTWVYRYADKIQKDPKSLVYSTRKEDLKHFNVEESSSVESTLSSKQK  
SVLFLFVLTFILMVLSPFWTDLGVTIFDDFNTWLTGLPVIGNIVGSSTALGTWYFPEGAMLFAFMGILIGVIYGLKEDISSFMNG  
AADLLSVALIVAARGIQVIMNDGMTITDILNWGKEGLSGLSSQVFIVVITYIFYLPMSFLIPSSSGLASATMGIMAPLGEFVNVRPSLI  
TAYQSASGVNLNLIAPTSIGVIMGALALGRINIGTWKFMGKLVVAIIVVTIALLLGTFLPFLZ

(SEQ. ID. NO. 75)

MSNSFVKLLVSQLFANLADIFFRVTHIANIYIISKSVIATSLVPILIGISSFVASLLVPLVTKRLALNRVLSLSQFGKTILLAILVGMFTV  
MQSVAPLVTYLFFVVAISILDGFAAPVSYAIVPRYATDLGKANSALSMTEGAVQLIGWGLGGLLFATIGLLPTTCINLVLYIISFLML  
FLPNAEVEVLESETNLEILLKGWKLVARNPRLRFLVSANLLEIFSNTIIVSSIILVFVTELLNKTESYWGYSNTAYSIGIISGLIAFRLS  
EKFLAAKWEPLFTPNLKTIONPCLSLDPGWFLFSPNGCFLLDKKEFPYGISVEKNTRKETHMNSLNPNNHFNQKSFYQLSFDGG  
HLTGGLIFFQELFSQKLKERISKYLVNDQRRYCRYSDSDILVQFLQLLTGTYGTDYACKELSADAYFKLLEGGQLASQPTLS  
RFLSRTDEETVHSLRCLNLELVEFFLQFHQLNQLIVDIDSTHFTTYGKQEGVAYNAHYRAHGYHPLYAFEGKTGYCFNAQLRPGN  
RYCSEADSFTIPVLERFNQLFRMDSGFATPKLYDLIEKTGQYYLIKLLKNTVLSRLGDLSPCPQDEDLTILPHSAYSETLYQAGS  
WSHKRRVCQFSEKGNLFYDVISLVNTMTSGTSQDQFQLYRGRGQAEFNKEMKEGFFGDKTDSSTLIKNEVRMMMSCIAYNLY  
LFLKHLAGGDFQTLTIKFRHLFLHVVGKCVTRGRKQLLKSSLYAYSELSFALYSRIRKVNLLNPVPEPPRRKASLMMHZ

(SEQ. ID. NO. 76)

MMEFFQQLPHLEPYGNPOYFVYVIAATLPIFIGLFFKKRFAWYEVVLSLFFIVTMLVGGKTNQLAALGIYLCWEILLLFYKHRYKS  
KDGKWWFYLVSLSLPIIFVKVQPAINGTQSLGFLGISYLTFRSVGIVIELRDGVIKDFTLWEFLRFLFMPTFSSGPIDRFKRFNEN  
YQAIPERDELMDMLDESRYIMWGFLYKFI LAHVLETLLPPLKNLALQSGFFNLYALAVMYTFGLELFFDFAGYSMFALAIISNL  
MGI RSPINFNKPFLSRDLKEFWNRWHMSLSFWFRDFVFMRMVMVLTTRKKVFKNRNVTSSMAYIVNMLIMGFHWGVTWYYIAYG  
LFHGLGLVINDAWVRKKKTLNKKERKKAGKAALPENRWIQLLGMVVTFHVVMLSFLIFSGFLNNLWFKKZ

(SEQ. ID. NO. 77)

MLKRLWMIFGPVLIAGLLVLLIFFYPTMHHNLGAEKRSVAVATTIDSFKERSQKVRALSDPNVRFPFFGSSEWLRFDGAHPAVL  
AEKYNRSYRPPYLLGQGAASLNQYFGMQMLPQLENKQVYVVISPWFSKNGYDPAAFQYFNGDQLTSFLKHQSGDQASQYA  
ATRLQQFPNVAMKDLVQKLASKEELSTADNEMIELLARFNERQASFFGQFSVRGYVNYDKHVAKYLKILPDQFSYQAIEDVVK  
DAEKNTSNEMGMENYFYNEQIKKDLKKLSDSKSFTYLYKSPEYNDLQLVLTQFSKSKVNPIFIIPVNVKKWMNYAGLREDMYQ  
QTVQKIRYQLESQGFNTIADFSKDGGEFFMKDTHLGLWGLWLAFDKAVDPFLSNPTPAPTYHLNERFFSKDWATYDGDVKEFQZ

(SEQ. ID. NO. 78)

MEKNLKALKQTTDQEGPAIEPEKAEDTKTVQNGYFEDAAVKDRTLSDYAGNWQSVYPFLEDGTFDQVFDYKAKLTGKMTQAEY  
KAYYTKGYHTDVTKINITDNTMEFVQGGQSKKYTYKYVGKKILTYKKGNGVRFLFEATDADAGQFKYVQFSDHNVAPVKAEH  
FHIFGGTSQEALFEEMDNWPTYYPDNLSGQEAQEMLAHZ

(SEQ. ID. NO. 79)

MKDGHLAHHRLLNGRIFQKLLSQDPEALYRGEQKILAVLWNSSETGCATATDIALATGLANNLTMMIKKLEEQKLIVVSPCGK  
DKRKKYLVLTELGKSQKEVGHVRSQKLDIFYKGFSEEEIHQFEGFQERILANLKEKGNEVZ

(SEQ. ID. NO. 80)

MTNLIATFQDRFSDWLTALSQHLQLSLLTLLAILLAIPAVFLRYHEKLADWVLQIAGIFQTIPSLALLGLFIPLMGIGTLPALTALV  
IYAIFPILQNTITGLKGIDPNLQEGAGIAGMTRWERLKKFEIPLAMPVIMSGIRTAAVLIIGTATLAALIGAGGLGSFILLGIDRNNASLI  
LIGALSSAVLAIAFNFLKVMEKAKLRTIFSGFALVALLGLSYSPALLVQKEKENLVIAKGIGPEPEILANMYKLLIEENTSMATV  
KPNFGKTSFLYEALKKGDIDYIPEFTGTVTESLLQSPKVSHEPEQVYQVARDGIAKQDHLAYLKPMYSQNTYAVAVPKKIAQEYQ  
LKTISDLKKVEGQLKAGFTLEFNDREDGNKGLQSMYGLNLNVATIEPALRYQAIQSGDIQITDAYSTDAELERYDLQVLEDDKQLF  
PPYQGA PLMKEALLKKHPELERVNLNTLAGKITESQMSQLNYQVGVEGSAKQVAKFEFLQEQGLLKKZ

(SEQ. ID. NO. 81)

MMHTYLQKKIENIKTTLGEMSGGYRRMVAAMADLGFSGTMKAIWDDLFAHRSFAQWIYLLVLGSFPLWLELVYEHRIVDWIGMI  
CSLTGICVIFVSEGRASNYLFLGINSVYILALQKGFYGEVLTLYFTVMQPIGLLVWYIQAQFKKEKQEFVARKLDGKGWTKYL  
SISVLWWLAFGFYQSIGANRPYRDSITDATNGVGQILMTAVYREQWIFWAATNVFSIYLWWGESLQIQGKYLIYLSLVGWYQ  
WSKAAKQNTDLLNZ

(SEQ. ID. NO. 82)

MRNMKAKYAVVWAFFLNLTVAIVEFIAGGVFGSSAVLADSVHDLGDAIAIGISAFLETISNREEDNQYTLGYKRFSLLGALVTAVI  
LVTGSVLVILENVTILHPQPVNDEGILWLGIIAITINLLASLVVGKGTKNESILSHFLEDTLGVAVILMAIVLRFTDWYILDPLL  
SLVISFFILSKALPRFWSTLKIFLDAVPEGLDIQVKSGLERLDNVASLNQLNLWTMDALEKNAIVHVLCKEMEHEMETCKESIRIFL  
KDCGQNTIEIDADLETHQTHKRKVCCLERSYEHQHZ

(SEQ. ID. NO. 83)

MIEYKNVALRYTEKDVLRDVNLQIEDGEFVVLVGPSSGSKTTLKMINRLLEPTDGNIMYMDGKRIKDYDERELRLSTGYVLQAIA  
LFPNLTVAENIALIPEMKGSKEEITKKTEELLAQVGLPVAEYGHRLPSELSSGGEQQRVGIVRAMIGQPKIFLMDPEFSALDAISRK  
QLQVLTKEHLKEFGMTTIFVTHDTEALKLADRIAVLQDGEIRQVANPETILKAPATDFVADLFGGSVHDZ

(SEQ. ID. NO. 84)

MSAVAISAMTKVMQETHGNPSSIHGHRQAGKLLREARQELAQLLRTKPHIFFTSGGTEGNNTTIIGYCLRHQEQGKHIITTAIEH  
HAVLETIDYLVQHFGFEATIIQPENQEITAQQIQKALRDDTILVSTMFVNNETGNLLPIAEIGQILKQHPAAHYHVDVQAIGKPIHSE  
ELGIDFLTASAHKFHGPKGIGFLYASSMDFDSYLHGGDQEQKKRAGTENLPAIVGMVAALKEDLEKQEEHFQHVQNLETAFLAEL  
EGIQYYLNRGKHLPLVYLNIGFPGQKNDLLRLDLAGISISTGSACTAGVQSSHVLEAMYGANSERLKSERISLSPQNTVEDLQ  
TLAKTLKEHIGGZ

(SEQ. ID. NO. 85)

MLFKLSKEKIELGLSRLSPARRIFLSFALVILLGSLLSLPFVQVESSRATYFDHLFTA VSAVCVTGLSTLPVAHTYNIWGGQIICLLLIQ  
IGGLGLMTFVGFYIQSKQKLSRSLRATIQDSFSYGETRSLRKVFYSIFLTTFLVESLGAILLSFRLIPQLGWGRGLFSSIFLAISAFNA  
GFDNLGSTSLFAFQTDLLVNLVIAGLIITGGLGFMVWFDLAGHVGRKKGRHLHFHTKLVLTLTIGLLFGTATTLFLEWNNAGTIG  
NLPVADKVLVVSFFQVTMRTAGFSTIDYTQAHPTVLLIYILQMFLLGGAPGGTAGGLKITTFFVLLVFARSELLGLPHANVARRTIAP  
RTVQKSFSVFIIILMSFLIGLILLGITAKGNPPFIHLVFETISALSTVGVTANLTPDLGKLALSVMPLMFMGRIGPLTLFVSLADYHPE  
KKDMIHYMKADISIGZ

(SEQ. ID. NO. 86)

MSDRITIGILGLGIFGSSVLAALAKQDMNIIAIDHAERINQFEPVLARGVIGDITDEELLRSAGIDTCDTVVATGENLESSVLAVMH  
CKSLGVPTVIAKVKSQTAKKVLKIGADSISPEYEMGQSLAQTLFHNSVDVFQLDKNVSIVEMKIPQSWAGQSLSKDLRGKYN  
LNLGFRQENSPLDVEFGPDDLLKADTYILAVINNQYLDLTVLALNSZ

(SEQ. ID. NO. 87)

MKLLSIAISSYNAAYLHYCVESLVIGGEQVGILINDGSQDQTQIEAECLASKYPNIVRAIYQENKCHGGA VNRGLVEASGRYFKV  
VDSDDWVDPRAYLKILETLQELESKGQEVDFVTNFVYEKEGQSRKKSMSYDSVLPVRQIFGWDQVGNFSKGQYTMHSLIYRT  
DLRLASQFZ

(SEQ. ID. NO. 88)

MKFNPQRYTRYSIRRLSVGVASVVVASGFFVLVGPQSSVRADGLNPTPGQVLPEETSQGTKEGDLSEKPGDVTLTQAKPEGVTGN  
TNSLPTPTERTVSEETSPSSLDTLFEKDEEAQKNPELTDVLKETVDTADVDGTQASPAETTPEQVKGKGVKENTKDSIDVPAAYLEK  
AEGKGPFTAGVNVQIPYELFAGDGMLTRLLKASDNAPWSDNGTAKNPALPPEGLTKGKYFYEVLDNGNTVGKQGGALIDQLR  
ANGTQTYKATVKVYGNKDGKADLTNLVATKNVDININGLVAKETVQKAVADNVKDSIDVPAAYLEKAKGEGPFTAGVNVHPIY  
ELFAGDGMLTRLLKASDKAPWSDNGDAKNPALSPLGENVTKGQYFYQVALDGNVAGKEKQALIDQFRANGTQTYSATVNVY  
GNKDGKPDLDNIVATKVTININGLISKETVQKAVADNVKDSIDVPAAYLEKAKGEGPFTAGVNVHPIYELFAGDGMLTRLLKA  
SDKAPWSDNGDAKNPALSPLGENVTKGQYFYQVALDGNVAGKEKQALIDQFRANGTQTYSATVNVYGNKDGKPDLDNIVATK  
KVTININGLISKETVQKAVADNVKTVSMFQQPTZ

(SEQ. ID. NO. 89)

MKLKSYILVGYIISTLLTILVVFVAVQKMLIAKGEIYFLLGMTIVASLVGAGISLFLLLPVFTSLGKLKEHAKRVAADKDFPSNLEVQG  
PVEFQQLGQTFNEMSHDLQVSFDSLEESEREKGLMIAQLSHDIKTPITSIQATVEGILDGIIKESEQAHYLATIGRQTERLNKLVEELN  
FLTNTARNQVETTSKDSIFLDKLLIECMSEFQFLIEQERRDVHLQVIPESARIEGDYAKLSRILVNLVDNAFKYSAPGKLEVVAKL  
EKDQLSISVTDEGQGIAPEDLENIFKRLYRVETSRNMKTGGHGLGLAIARELAHQLGGEITVSSQYGLGSTFTLVNLGSGSENKAZ

(SEQ. ID. NO. 90)

MFGQTAQHGLTNSLKDWFIFLLNIGPQLAFFCQMLRCSRSEVQGTGNHRRFENMIQIFSHFGMTHLGQIKLVYQESIDLELLVNA  
LNHLLIDRLVLTNPQITIEIDRQIVHGLDLLKGRKDKEIIDIKSMFRQLELASTQQICPINQRVHHGILAFGEISDLVPAKNLPNRQDZ

(SEQ. ID. NO. 91)

MEHLATYFSTYGGAAFFAALGIVLAVGLSGMGSAYGVGKAGQSAALLKEQPEKFASALILQLLPGTQGLYGFVIGILIWLQLTPEL  
PLEKGVAYFFVALPIAIVGYFSAKHQGNVAVAGMQILAKRPKEFMKGAILAAMVETAYAILAFVVSFILTRVZ

(SEQ. ID. NO. 92)

MLKSEKQSRQMLNEELSFLLEGETNVLANLSNASALIKSRFPNTVFAGFYLFDGKELVLGPFQGGVSCIRIALGKGVCGEAAHFQ  
ETVIVGDVTTYLNYISCDLSAKSEIVVPMKNGQLLGVLDDLSSEIEDYDAMDRDYLEQFVAILLEKTAWDFTMFEEKSZ

(SEQ. ID. NO. 93)

MSVLEIKDLHVEIEGKEILKGVNLTTLKTGEIAAIMGPNGTGKSTLSAAIMGNPNYEVTKGEVLFDGVNILELEVDERARMGLFLAM  
QYPSEIPGITNAEFLRAAMNAGKEDDEKISVREFITKLDEKMELNNMKEEMAERYLNEGFSGGEKKRNEILQLLMLEPTFALLDEID  
SGLDIDALKVVSXGVNAMRGEGFGAMIITHYQRLNLYITPDVVHVMMEGRVVLSSGGPELAARLEREGYAKLAELGYDYKEELZ

(SEQ. ID. NO. 94)

MPYKRQSRFSMALSKLDSLYMAVVADHSKNPHHQKLEDAEQISLNNPTCGDVINLSVKFDAEDRLEDIAFLNSGCTISTASASM  
MTDAVLGKTKQEILELATIFSEMVGQKDERQDQLGDAAFLSGVAKFPQRIKCATLAWNALKKTIENTQEKQZ

(SEQ. ID. NO. 95)

MKIQDLLRKDVMLLDLQATEKTAVIDEMIKNLTDHGYVTDFTFKEGILAREALTSTGLGDGIAMPHSKNAAVKEATVLFASXNK  
GVDYESLDGQATDLFFMIAAPEGANDTHLAALAELSQYLMKDGAFDKLRQATSADQVIELFDQASEKTEELVQAPANDSGDFIVA  
VTACTTGIAHTYMAQEALQKVAEMGVGKIVETNGASGVGNQLTAEDIRKAKAIIIAADKAVEMDRFDGKPLINRPVADGIRKTE  
ELINLALSGDTEVYRAANGAKAATASNEKQSLGGALYKHLMSGVSQMLPFVIGGGIMIALAFLIDGALGPVNENLGNLSYHELA  
SMFMKIGGAFAFLMLPVFAGYVAYSIAEKPLVAGFVAGAIKEGFAFGKIPYAAGGEATSTLAGVSSGFLGALVGGFIAGALVL  
AIKKYVKVPRSEGAKSILLPLLTGTILTGFMVLAVNIPMAAINTAMNDFLGGGGSVALLGIVLGGMMAVDMGPGVNAKAAVY  
FGTGTLAATVSSGGSVAMAAVMAGGMVPLAIFVATLLFKDKFTKEERNSGLTNIIMGLSFITEGAIPFGAADPARAIPSFILGSAVA  
GGLVGLTGIKLMAHPHGIFVIALTSNALLYLVSVLVGAIVSGVVYGYLRKPQAZ

(SEQ. ID. NO. 96)

MANKNTSTTRRRPSKAELERKEAIQRMLISLGIAILLIFAAFKLGAAGITLYNLIRLLVGSLAYLAIFGLLIYLFFFKWIRKQEGLLSGF  
FTIFAGLLIFEAYLVWKYGLDKSVLKGTMQVVTDLTGFRSTSFAGGGGLIGVALYIPTAFLFSNIGTYFIGSILILVGSLLVSPWSVY  
DIAEFFSRGFAKWWEGHERRKEERFVKQEEKARQKAKEARLEQEETEKALLDLPPVDMETGEILTEEAQVQLPPIPEEKWVEPEII  
LPQAEKFPEQEDDSDEDEDVQVDFSAKEALEYKLPSLQLFAPDKPKDQSEKKIVRENIKILEATFASFGIKVTVRAEIGPSVTKYE  
VKPAVGVRVNRISNLSDDLALALAAKDVRIEAPIPGKSLIGIEVPNSDIATVSFRELWEQSQTKAENFLEIPLGKAVNGTARAFDLSK  
MPHLLVAGSTGSGKSVAVNGHIASILMKARPDQVKFMMVDPKMWELSVYNDIPHLLIPVVTNPRKASKALQKVVDENMENRYELFA  
KVGVRNIAGFNAKVEEFNSQSEYKQIPLPFIVVIVDELADLMVASKEVEDAIIRLGQKARAAGIHMILATQRPSPVDVISGLIKANV  
PSRVAFVSSGTDSTRTILDENGAEKLLGRGDMLFKPIDENHPVRLQGSFISDDVERIVNFIKTQADADYDESFDGPGEVSENEGEFS  
DGDAGGDPLEEFKSLVIETQKASASMIQRRLSVGFNRATRLMEELEIAGVIGPAEGTKPRKVLQZZ

(SEQ. ID. NO. 97)

MSYFKKYKFDKSQFKLGMRTFTKGIAVFLVLLIFGFFGWKGLQIGALTAVFSLRESFDESVEHFGTSRILGNSIGGLYALVFFLLNTFF  
HEAFWVTLVVVPICMTLMTNTVAMNNKAGVIGGVAAMLIITLSIPSGETILYVVRVLETFMGVFVAIIVNYDIDRIRLFLEKKEKZ

(SEQ. ID. NO. 98)

MNKSEHRHQIRALITKNKIHTQAEQLALLAENDIQVTQATLSRDIKNMNLKSVREEDSAYYVLNNGSISKWEKRELYMEDALV  
WMRPVQHQLVLLKTLPLGLAQSFSGIIDLTSFPDAIATLCGNDVCLICEDADTAQKCFEELKKFAPFFFEZ

(SEQ. ID. NO. 99)

MKSIKLNALSYMIRVNLNIIFILTGTYVARVLDRTDYGYFNSVDLTLSFFLPFATYGVYNYGLRAISNVKDNKKDLNRTFSSLYLCL  
IACITLTTAVYILAAYPLFTDNPIVKVYLVGMGIQLIAQIFSIEWVNEALENYSFLFYKTAIRILMLVSIFLVKNEHDIVVYTLVMSL  
STLINYLISYFWIKRDIKLVKIHLSDFKPLFLPLTAMLVFANANMLFTFLDRFLVKTGIDVNVSYTYIAQIRIVTVIAGVVTGAIGVSV  
PRLSYLGGKGDKEAYVSLVNRGRSIFNFFIPLSFGLMVLGPNAILLYGSEKYIGGGILTSFAFRTIILALDILGSQILFTNGYEKRI  
VYTVFAGLLNLGLNLSLFFNHIVAPEYLLTMTLSETSLVFIIFHRRKQLIHLGHIFSITVRYSLFSLSFVAIYFLINFPVDMVIN  
LPFLINTGLIVLLSAISYISLLVFTKDSIFYEFLNHVLALKNKFKKKSZ

(SEQ. ID. NO. 100)

MELFMKITNYEIKLKKSGLTNQILKVLLEYGENVDQELLGDIADISGCRNPVFMERYFQIDDAHLSKEFQKFPFSILDDCYPW  
DLSEIYDAPVLLFYKGNLDLLKFPKVAVVGSRACSKQGAKSVEKVIQGLENELVIVSGLAKGIDTAAHMAALQNGGKTIAVIGTGL  
DVFFYPKANKRLQDYIGNDHLVLSEYGPGEQPLKFHFPARNRIIAGLCRGVIVAEAKMRSGSLITCERAMEEGRDVFAIPGSILDGLS  
DGCHHLIQEGAKLVTSGQDVLAEEFZ

(SEQ. ID. NO. 101)

MKQLTVEDAKQIELELDYIDTLCKKHNNINYIINYGTLLIGAVRHEGFIPWDDDDIDLSMPREDYQRFINIFQKEKSKYKLLSLETDKNY  
FNNFIKITDSTTKIIDTRNTKTYESGIFIDIFPIDRFDDPKVIDTCYKLESFKLLSFSKHKNNIVYKDSLLKDWRITAFWLLRPVSPRYFA  
NKIEKEIQKYSRENGQYMAFIPSKFKEKEVFPSTGTFDKTIDLFPENLSLPAPEKFDITLTQFYGDYMTLPPEEKRFYSHEFHAYKLED  
Z

(SEQ. ID. NO. 102)

MIKINHLTITQNKDLRLVSDLTMTIQDGEKVAIIEEGENGKSTLLKILMGEALSDFTIKGNIQSDYQSLAYIPQKVPEDLKKKTLHD  
YFFLSDILDYSILYRLAEELHFDNSRFASDQEIGNLSGGEALKIQLIHELAKPFEILFDEPSNDLDLETVDWLKGGIQTTRQTVIFIS  
HDEDLSETADTIVHLRLVKHRKEAETLVEHLDYDSYSEQRKANFAKQSQAANNQRAYDKTMEKHRRVKQNVETALRATKDS  
TAGRLLAKKMKTVLSQEKRYEKAQASMTQKPLEEEQIQLFFSDIQLPLASKVLVQLEKENLSIDDRVLVQKLQTLTVRGQEKIGIIGP  
NGVGKSTLLAKLQRLNLDKREISLGFMPQDYHKKQLDLSPAIYLSKTGEKEELQKIQSHLASLNFSYPEMQHQRISLSSGGQGGKL  
LLDLVLKRPNLFLLDEPTRNFSPTSQPIRKLKFATYPGGLITVSHDRFLKEVCSIIYRMTEHGLKLVNLEDLZ

(SEQ. ID. NO. 103)

MKPKTFYNLLAEQNLPLSDQKQEFERYFELLVEWNEKINLTAITDKEEVYLVKHFYDSIAPILQGLIPNETIKLLDIGAGAGFPLPM  
KILYPELDVTIDSLNKRINFLQLLAQELDLNGVHFYHGRAEDFAQDKNFRAQYDFVTARAVARMQVLSLTIPYLKVGKLLALK  
ASNAPEELLEAKNALNLLFSKVEDNLSYALPNRDPRIYTVVEKKKETPNKYPRKAGMPNKRPLZ

(SEQ. ID. NO. 104)

MSIKLIAVDIDGTLVNSQKEITPEVFSAIQDAKEAGVKVVIATGRPIAGVAKLLDDLQRLDEGDYVVTFNAGLVQETATGHEIISSEL  
TYEDYLDMEFLSRKLGVMHHAITKDGIYTANRNICKYTVHESLTVSMPIFYRTPEEMAGKEIVKCMFIDEPEILDAAIEKIPAEFYER

YSINKSAPFYLELLKKNVDKGAITHLAEKLGKLTDETMAGDEENDRAMLEVVGPNVVMENGNEPKKIAKYITKTNDESGVAH  
AIRTWVLZ

(SEQ. ID. NO. 105)

MTWILGVIALIVIFVIVSYNGLVKNRMQTKAEWSQIDVQLKRRNDLLPNLIETVKGYAKYEGSTLEKVAELRNQVAAATSPAEM  
KASDALTRQVSGIFAVAESYPDLKASANFVKLQEELTNTENKISYSRQLYNSVSNYNVKTETFPSNIIAGMFGKAADFLQTPEEE  
KSPVKVDFSGLDZ

(SEQ. ID. NO. 106)

MLFDQIASNKRKTWILLVFFLLALVGYAVGYLFIRSGLGGLVIALIIGFIYALSMIFQSTEIVMSMNGAREVDEQTAPDLYHVVE  
DMALVAQIPMPRVFIIDDPALNAFATGSPNQNAVAATSGLLAIMNREELEAVMGHEVSHIRNYDIRISTIAVALASAITMLSSMAG  
RMMWWGGAGRRRSDDDRDGNGLEIIMLVVSLAIVLAPLAATLVQLAISRQREFLADASSVELTRNPQGMINALDKLDNSKPM  
RHVDDASSALYINDPKKGGGFQKLFYTHPPISERIERLKQZ

(SEQ. ID. NO. 107)

MKLNIEIRKQSEGLNFEQTLDDLVDLARNQEILDVKDILAVGKVQYEDRMFLDYQLSYTIVLASSRSMPELVESYPVTEVF  
MEGATNQLDQEVLDLVLPIENGELDLAESVSDNILLNIPIKVLTAEEAGQGFGISGNDWQIMTEEEYQAQKAVKEENSPFAGL  
QGLFDGDEZ

(SEQ. ID. NO. 108)

MKRQLALVVFSGGQDSTTCLFWVMQHYETVEAVTFAYGQRHHLEIQITREIAKEQGIRHHILDMSLLGQITAQPDFATIHISYIPDK  
LCVESKSLKLYLFSYRNHGDHENCINTIGKDLVNLLDPRYLEVWGKFTPRGGISIDPYNYGKQGTKEYGLAEQRLFHQDLYPEK  
IDNRZ

(SEQ. ID. NO. 109)

MTETVEDKVSHSITGLDILKGIVAAGAVISGTVAQTQKVFTNESAVLEKTVEKTDALATNDTVVLGTISTSNSASSTSLSASESASTS  
ASESASTSASTSASESASTSASTSISASSTVVGSTAAATEATAKKVEEDRKKPASDYVASVTNVNLQSYAKRRKRSVDSIEQ  
LLASIKNAAVFSGNTIVNGAPAINASLNAKSETKVYTGEVDSVYRVPIYKLVKTNDGSKLTFTYTVTYVNPKTNDLGNISSMRP  
GYSIYNSGTSTQMTLTLGSDLGKPSGVKNYITDKNGRQVLSYNTSTMTTQSGGYTWGNGAQMNFGFAKKGYGLTSSWTVPTGT  
DTSFTFTPYAARTDRIGINIYFNGGGKVVESSSTSQLSQSKSLVSASQSASASTSASASASTSASASASTSASASASTSASVSAST  
SASASASTSASASASTSASESASTSASASASTSASASASTSASASASTSASESASTSASASASTSASESASTSASASASTSASASASTS  
SGSASTSTSASASTSASASASTSASASASISASESASTSASESASTSTSASASTSASESASTSASASASTSASASASTSASASASTSASAS  
TSASESASTSASASASTSASASASTSASASASTSASASASTSASASASTSASASASTSASESASTSASASASTSASASASTSASASASTS  
ASASASTSASESASTSASASASTSASESASTSASASASTSASASASTSASGSASTSTSASASTSASASASTSASASASISASESASTSASE  
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QRQPVRQLQQVVLQSQHQVQLQPHRQVPRQLQAQHLNQRRAQQLQQVPRQPQRQVRQPQQVVLVHQLQHQRVHRLRR  
QPVHQSQQVPRQLPHQQVPRQLQAPVRRQLQQVLAPQPQPVRQPQQVSRQLNRHQVRPLQQVLAPQPQRQVHRLQRQRV  
RLNRHQVRPLQQVLAPQPQRQVHRLQHQRVRPLQQVLAPQPQRQVHRLQRQRVRLSQHQVRQPQQAHQLNLHQPVRQP  
QHRQAPQLQQVPRQPQRQVRRLQQVPRQPQQVPRQPQRQVRRPQPVLHNRHQVRRPQQVVLVHQLQHQRVHRLQHQP  
HQSQQVPRQFRINKCLGFSKYZ

(SEQ. ID. NO. 110)

MGVETWIFYSSICWLAIGLSVWKFPMYMTAANGGGGFLIFLISTILIGFPLLLAEFALGRSAGVSAIKTFGLGKNNKYNFIGWIGA  
FALFILLSFYSVIGGWILVYLGIEFGKLFQLGGTGDYALQFTSISNPAIALGAQAFAFILLNIFIVSRGVQKGIERASKVMMPLLFIVFV  
FIIGRSLSLPNAMEGVLYFLKPDFSKLTSTGLLYALGQSFFALSGLVTVMLTYASYLDKKTNLVQSGISIVAMNISISIMAGLAIFQAR  
SPFNIQSEGGPSLLFIVLPQLFDKMPFGTIFYVLFLLFLFATVTFVVMLEINVDNITNQDNSKRAKWSVILGILTFVFGIPALSIGV  
MADVHIFGKTFDAMDFLVSNLLMPFGALYLSLFTGYIFKKALAMEELHLDERAWKQGLFQVWLFLRFFVSSSQSSSLWSSLPNL  
CNQKGLEZ

(SEQ. ID. NO. 111)

MLKKWQLKDVILLAFLLSIFGGVFVGSGYVYNILSLLTPLGLQAFANEILFGLWCMAPIAAIFVPRVGSATIGEVLAAAEVLYG  
SQFGLGALLSGFVQGLGSEFGFIVTKNRYESWLSLTANSIGITLVSVFYEYIKLGYAFSLPFVLSLLVRFISVYFFCTILVRAIVKL  
YHQFATGGKAZ

(SEQ. ID. NO. 112)

MVKVATQTPHSLFLLLSLETSPISIALTSLVVAFCILFMYLRYRRFKMLAWMIILAILPSFANYWAVQLHGDASQAVMLGTRAFVT  
VCIGLVFVSSVSLKELLYLAQKGLSRWSYALIVVFNFPFLIQEIKSLKEACLLRGQELHFWSPLIYSKVLMTVFRWRHLYLRL  
SAHGDEHAQLKNSYRTFYIPKTKLIYLLFFLLQTSFLZ

(SEQ. ID. NO. 113)

MRKHQLQVHKLTLISMMLDVLVLTPIFRIEGMAPMSSVNVILAGIMMGVYALAMATVTAFFIRMTTQGIPLALTGATFGALLAG  
LFYKYGRKFHYSALGEILGTGIISIVSYPMVLTGSAAKLSWFIYTPRFFGATLIGTAISFIAFRFLIKQEFFFKQVGYFFSERIDZ

(SEQ. ID. NO. 114)

MQEFTNPFPIGSSSLIHICITNEISCEMLANGILALGCKPVMADDSREVLDFTKQSQUALFINLGHLSAEKEKAIRMAASYANQSSLP  
VDAVGVTTSIRKSLVKDLDYRPTVLKGNMSEIRSLVGLKHHGVGDASAKDQETEDLLQVLKDWQCQTYPGMSFLVTGPKDLV  
VSKNQVAVLGNCTELDWITGTGLVGLALTAVFLSQGKTGFEASCLAVSYLNIAAEKIVVQGMGLEEFYQVNLQSLLRDEN  
WLDTIKGEVYEZ

(SEQ. ID. NO. 115)

MNHKIAILSDVHGNATALEAVIADAKNQGASEYWLLGDIPLPGGANDLVALLKDLPTASVRGNWDDRVLALDGGYGLEDPQ  
EVQLLRMTQYLMERMDPATIVWRLSLPLEKKEIDGLRFSISHNLPDKNYGGDLLVENDTEKFDQLLDAETDVAVYGHVHKQLL  
RYGSQGGQIINPGSIGMPYFNWEALKNHRSQYAVIEVEDGELLNIQFRKVAYDYAELELAKSKGLPFIEMEELRRDDNYQGHNL  
ELLASLIEKHGYVEDVKNFFDLZ





(SEQ. ID. NO. 127)

MKSINKFLTMLAALLLTASSLFSAAVFAAGTTTTSTVTHKLLATDGDMDKIANELETGNYAGNKVGVLPANAKEIAGVMFVWT  
NTNNEIDENGQTLGVNIIDPQTFKLSGAMPATAMKKLTEAEGAKFNTANLPAAKYKIYEHSLSTYVGEDGATLTGSKAVPIEILP  
LNDVVDAAHVYPKNTAEKPKIDKDFGKANPDTPRVDKDTVPVNHQVGDVVEYEIVTKIPALANYATANWSDRMTEGLAFNKGTV  
KVTVDVDALEAGDYALTEVATGFDLKLTDAGLAKVNDQNAEKTVKITYSATLNDKAIVEVPESNDVTFNYGNNPDHGNTPKPNK  
PNENGDLTLTKTWVDATGAPIPAGAEATFDLVNAQTGKVVQTVTLTDDKNTVTVNGLDKNTKEYKFVERSIKGYSDYQEITTAG  
IAVKNWKDENPKPLDPTPEPKVVTYGKKFVKVNDKDNRLAGAEFVIANADNAGQYLARKADKVSQEEKQLVVTTKDALDRAVA  
AYNALTAQQQTQOEKEKVDKAQAAAYNAAVIAANNAFEWVADKDNENVVKLVSDAQGRFEITGLLAGTYYLEETKQPAGYALL  
TSRQKFEVTATSYSATGQIEYTAGSGKDDATKVVNKKITIPQTGGIGITHFAVAGAAIMGIAVYAYVKNKDEQDLAZ

(SEQ. ID. NO. 128)

MTMQKMQMISIRIFFVMALCFSLVWGAAHVQAQEDHTLVQLQENYQEVVSQLPSRDGHRLOVWKLDDSYSDRVRQIVRDLHS  
WDENKLSFFKTSFEMTFLENQIEVSHIPNGLYVRSIIQTDVSYPAEFLFEMTDQTVPLVIVAKKTDMTTKVKLIKVDQDHNH  
LEGVGFKLVSARVDSEKEVPLIGEYRYSSSGQVGRITLYTDKNGEIFVTNLPLGNRYRKEVEPLAGYAVTTLDTDVQLVDHQLVTI  
TVVNQKLPRGNVDFMKVDGRTNTSLQGAMFKVMKEESGHYTPVLQNGKEVVVTSKGDGRFRVEGLEYGTYLWELQAPTGYV  
QLTSPVSFTIGDKTRKELVTVVKNKRPRIDVPDTEETLVYLDACCHFVWVZ

(SEQ. ID. NO. 129)

MSHIYLSIFTSLLMLGLVNVAAQADEYLRIQMEAAAYAPFNWTQDDDSNGAVKIDGTNQYANGYDVQIAKKIAKDLGKEPLVVKT  
KWEGLVPALTSKIDMIIAGMSPTAERKQIEAFSSSYTSEPVLVKKDSAYASAKSLDDFNGAKITSQQGVYLYNLIAQIPGAKKE  
TAMGDFQAQMRQALEAGVIDAYVSRPEALTAEAAANSKFKMIQVEPGFKTGEEDTAIAIGLRKNDNRISQINASIEISKDDQVALM  
DRMIKEQPAEATTTTEETSSSFSQVAKILSENWQQLLRGAGITLLISVGTIIGLIIGLAIGVFRAPLSENKVIYGLQKLGVWVNLVYI  
EIFRGTPMIVQSMVIYYGTAQAFGINLDRTLAAIFIVSINTGAYMTEIVRGILAVDKGQFEAAATALGMTHNQTMRKIVLPQVVRNI  
LPATGNEFVINIKDTSVLNVISVVELYFSGNTVATQTYQYFQFTTHIAVYFVLFTFTVTRILRFIERRMDMDTYTTGANQMOTEDLKZ

(SEQ. ID. NO. 130)

MTQAILEIKHLKKSYGQNEVLKDISLTVHKGEVISIIGSSSGSGKSTFLRSINLLETPTDGGILYHGQNVLEKGYDLTQYREKLGVMVFO  
SFNLFENLVLENTIVAQTTLVKRRETEAEKIAKENLEKVGMGERYWQAKPKQLSGGQKQVVAIARALSMNPDAILFDEPTSLD  
PEMVGEVLKIMQDLAQEGLTMIVVTHEMEFARDVSHRVIFMDKGVIAEEGKPEDLFTNPKEVRTKEFLQRYLKZ

(SEQ. ID. NO. 131)

MKKYQLLFFKISAVFSYLFVFSLSQLTLIVQNYWQFSSQIGNLFWIQNILSLLFIGVMIVVLVKTGHGYLFRIPRKKWLWYSILTVL  
LVFQISFNVTAKHVQSTAEQWAVLIGYSGTNFAELGIYIALFFLVPLMEELIYRGLLQHAFFKHSRFLDLLPSILFALPHFSSSLP  
LLDIFVFATVGIIFAGLTRYTKSIYPSYAVHVINNIVATFPFLLTFLHRVLGZ

(SEQ. ID. NO. 132)

MNKKQWLGLGLVAVAAVGLAACGNRSSRNAASSSDVKTAAIVTDTGGVDDKSFNQSAWEGLQAWGKEHNLSKDNNGFTYFQS  
TSEADYANNLQQAAGSYNLIFGVGFALNNVKAADKEHTDLNLYVLIDDVIKQKNVASVTFADNESGYLAGVAAAKTTTKTKQV  
GFVGGIESEVISRFEAGFKAGVASVDPSIKVQVDYAGSFGDAAGKGTIAAAQYAAGADIVYQVAGGTGAGVFAEAKSLNESRPN  
EKVWVIGVDRDQEAEGKYTSKDGKESNFVLVSTLKQVGTTVKDISNKAERGEFGGQVIVYSLKDKGVDLAVTNLSEEGKKA  
DAKAKILDGSKVPEKZ

(SEQ. ID. NO. 133)

MSKKLQQISVPLISVFLGILLGAIVMWIFGYDAIWGYEELFYTAFGSLRGIGEIFRAMGPLVLIGLGFVAVSRAGFFNVGLPGQALAG  
WILSGWFALSHDMPRLMILATIVIALIAGGIVGAIPGILRAYLGTSEVIVTIMMNYIVLYVGNAFIHAFFPKDFMQSTDSTIRVGAN  
ATYQTFWLAEALTGNSRMNIGIFFAJIAVAVIWFMLKKTTLGFEIRAVGLNPHASEYAGISAKRTIILSMIISGALAGLGGAVEGLTF  
QNVVYVQSSLAIGFNGMAVSLLAANSPIGILFAAFLFGVLQVVGAPGMNAAQVPSSELVSIVTASIIFFVSVHYLIERFVKPKKQVKG  
KZ

(SEQ. ID. NO. 134)

MGVKKKLLKLSLLGLSLLIMTACATNGVTSDDITAESADFWSKLVIYFFAEIIRFLSFDISIGVHILFTVLIRTVLLPVFQVQMVASRKM  
QEAQPRIKALREQYPRDMESRTKLEQEMRKVFKEGMVGRQSDSLWPILIQMPVILALFQALS RVDFLKTGHFLWINLGSVDTTLV  
PILAAVFTFLSTWLSNKALESERNGATTAMMYGIPVLIFIAVYAPGGVALYWTVSNAVYQVLQTYFLNNPFKIAEREA VVQAQKDL  
ENRRKAKKKAQKTKZ

(SEQ. ID. NO. 135)

MVIDPFAINELDYLLVSHFSDHIDPYTAAAILNPNKLEHVKFIGPYHCGRIWEGWGPKEIIVVKPGDITIELKDMKIHAVESFDR  
TCLVTLPVNGADETGELAGLAVTDEEMAQKAVNYIFETPGGTIYHGADSHFSNYFAKHGKDFKIDVALNNYGENPVGIQDKMT  
SIDLLRMAENLRKVIIPVHYDIWSNFMASNEILELWKMRKDRQLQYDFHPFIWEVGGKYTYPDQHLVEYHHPRGFDDCFEQDS  
NIQFKALLZ

(SEQ. ID. NO. 136)

MFLSGWLSSFANTYIHDLLGVLPDPSFLNAFESAIAAPLVEEPLKLLSLVFLALIPVRKLKSLFLLGIASGLGFQMIKDIGYIRTDLP  
EGFDFITSRILERIISGLASHWTFSGLA VVGYYLLRAYKKGQKVGKKQGLIFLGLALGTHFLFNSPFVELETPLAIPVVTAIALYGF  
YHAYCFVEKHNEMLTZ

(SEQ. ID. NO. 137)

MKVEPRCDVLSRMSHFIRILIMELQELVERSWAIRQAYHELEVKHHDSKWTVVEEDLLALSNDIGNFQRLVMTKQGRYYDETPYT  
LEQKLSENIWWLELSQRLDIDILTEMENFLSDKEKQLNVRTWKZ

(SEQ. ID. NO. 138)

MLDWKQFFLAYLRSRSLFIYLLSLAFLVLLFQFLFASLGIYFLYFFFLCCFVTILFFTWDILVETQVYRQELLYGEREAKSPLEIALA  
EKLEAREMELYQQRSKAERKLTDLDDYYTLVWHQIKTPIAASQLLVAEVVDRQLKQQLQEQEIFKIDSYTNLVLYQLRLESFHDDL

LKQVQIEDLVKEIRKYALFFIQKGLNVNLHDLDEIVTDKKWLLVVIEQIISNSLKYTKEGGLEIYMDDQELCIKDTGIGIKNSDVL  
RVFERGFSYNGRLTQSSSGLGLYLSKKISEELGHQIRIESEVGKGTTVRIQFAQVNLVLEZ

(SEQ. ID. NO. 139)

MELNTHNAEILLSAANKSHYPQDELPEIALAGRSNVGKSSFINTMLNRKNLARTSGKPGKTQLLNFFNIDDKMRFVDVPGYGYAR  
VSKKEREKWGCMEIEYLTTRENRAVVSVDLRHDPSSADDVQMYEFLKYYEIPVIVATKADKIPRGKWNKHESAIAKKLNFDP  
DDFILFSSVSKAGMDEAWDAILEKLZ

(SEQ. ID. NO. 140)

MTKKQLHLVIVTGMMSGAGKTVAIQSFEDLGYFTIDNMPPALLPKFLQLVEIKEDNPKLALVVDMRSRSFFSEIQAFLDELENQDGL  
DFKILFLDAADKELVARYKETRRSHPLAADGRILDGIKLERELLAPLKNMSQNVVDTTTELTPRELKRLAEQFSDQEQAQSFRIEV  
MSFGFKYGIPIDADLVFDVRFPLPNPYLPELRNQTGVDEPVYDYVMNHPESEDFYQHLLALIEPILPSYQKEGKSVLTIAMGCTGGQ  
HRSVAFAKRLAQDLSKNWSVNEGHRDKDRRKETVNRSZ

(SEQ. ID. NO. 141)

MRKPKITVIGGGTSPVILKSLREKDVEIAAIVTVADDGGSSGELRKNMQQLTPPGDLRNVLVAMSDMPKFYEKVFQYRFSEDAG  
AFAGHPLGNLIAGLSEMOGSTYNAMQLLSKFFHTTGKIYPSDDHPLTLHAVFQDGTVEVAGESHIVDHRGIIDNVYVTNALNDDTPL  
ASRRVVQTILESMDIVLGPGLSFTSILPNIVIKEIGRALLETKAIEIAYVCNIMTQRGETEHFTDSHVEVLHRHLGRPFIDTVLVNIEK  
VPQEYMNSNRDFEYLVQVEHDFVGLCKQVSRVISSNFLRLENGGAFFHDGDLIVDELMRI  
IQVKKZ

(SEQ. ID. NO. 142)

MKNLIKLLIIRLIVNLADSIFYVALWHVSNNYSSSMFLGIFIAVNYLPDLLLLIFFGPVIDRVNPQKILIISILVQLAVAVIFLLLLNQISF  
WVIMSLVFISVMASISYVIEDVLIPQVVEYDKIVFANSLSISYKVLDSIFNSFASFLQVAVGFILLVKIDIGIFLLALFILLLLKFRTSN  
ANIEFNSFKYYKREVLQGTGFILNKLKLFKTSISLTLINFFYSFQTVVPIFSIRYFDGPIFYGIFLTIAGLGGILGNMLAPIVIKYLSN  
QIVGVFLFLNGSSWLVAIVIKDYTLSDLFFVCFMSKGVNFIHNSLYQQIPPHQLLGRVNTTIDSIISFGMPIGSLVAGTLIDLNIELVLI  
AISIPYFLSYIFYTDNGLKEFSIYZ

(SEQ. ID. NO. 143)

MMSNKNKEILIFAILYTVLFMFDGVKLLASLMPSAIANLYLVYVVALYGSFLFKDRLIQWKEIRKTKRKFFFGVLTGWLFILMT  
VVFVSEMLKQFVGLDGGQLNQSNQSTFQEQPLLIIVFACVIGPLVEELFFRQVLLHYLQERLSGLLSIHLVGLVFALTHMHSLAL  
SEWIGAVGYLGGGLAFSIIYVKEKENIYPLL VHMLSNSLSLIIAISIVKZ

(SEQ. ID. NO. 144)

LKKPIIEFKNVSKVFEDSNTKVLKDNFELEEKGKFTLLGASGSGKSTILNIIAGLLDATTGDIIMLDGVRINDIPTNKRVDVHTVFQSYA  
LFFPHMNVFENVAFPLRLRKIDKKEIEQVAVELKVMVQLEGYEKRSIRKLSGGQRQVVAIARAIIHQPRVVLDEPLSALDLKLRD  
MQYELRELQQRLLGITFVFVTHDQEEALAMSDWIFVMNDGEIVQSGTPVDIYDEPINHFVATFIGESNILPGTMIEDYLVFENGKRFE  
AVDGGMKPNPEVEVVIRPEDLRITLPEEGKLQVKVDTQLFRGVHYEIIAYDELGNEWMIHSTRKAIVGEEIGLDFEPEDIHIMRLNE  
TEEFDFARIEEYVEIEEQEAGLINAIEEERDEENKLZ

(SEQ. ID. NO. 145)

MKSMRILFLLALIQISLSSCFLWKECILSFKQSTAFFIGSMVFVSGICAGVNYLYTRKQEVHVSVLASKKSVKLFYSMLLLINLLGAVL  
VLSNLFIKNTLQQLVDFLLPSFFFLGDLILLPLKKYVRDFLAMLDRKKTVLVLTILATLLFLRNPMTIVSLIIYIGLGLFFAAYL  
VPNSVKKEVSFYGHIFRDLVLVIVTLIFFZ

(SEQ. ID. NO. 146)

MVKKIIGMVLALLSVTVGVGVFAYTIYQQTETLAKTYKKIGEETKVIEATEPLTILLMGVDTGNVERTETWVGRSDSMILMTV  
NPKTKKTTMMSLERDILTRIESGNGQAHEAKLNSAYADGGAELAIETIQKMMNIHIDRYVMVNMRLGLQKLVDVAVGGITVNNILGF  
PISISDQEEFNTISIGVGEQHIGGEEALVYARMRYQDPEGDYGRQKRQREVIQKVMKALSLSIGHYQEILKALSDNMQTNIDLSA  
KSIPNLLGYKDSFKTITETQQLQGEQILQGVSYQIVSRAHMLEMQNLLRRSLGQEEVTQLETNAVLFEDLFGRAVPVGDEDNZ

(SEQ. ID. NO. 147)

MKKQAYVIAITSLFLVFFFSHLSLEILDFDWSIFLHDVEKTEKFVLLLVFSMSMTCLLALFWRGIEELSLRKMQANLKRLLAGQE  
VVQVADPDLDAFSLSGKLNLLTEALQKAENQSLAQEIEIEKERKRIARDLHDTVSQELFAAHMILSGISQQALKLDREKMQTQ  
LQSVTAILETAQKDLRVLLHLRPVELEQKSLIEGIQILLKELEDKSDLRVSLKQNMTKLPKKIEEHIFRILQELISNTRLHAQASCLD  
VYLYQTDVELQLKVVDNGIGFQLGSLDDLSYGLRNIKERVDMAGTVQLLTAPKQGLAVDIRIPLLDKEZ

(SEQ. ID. NO. 148)

MIVSIIISQGFVWAILGLGIFMTFRILNFPDMTTEGSFPLGGAVAVTLITKGVNPFLATLVAVGAGCLAGMAAGLLYTKGKIPTLLSGI  
LVMTSCHSIMLLMGRANLGLLGTQIQDVLFPDSDLNQLLTGLIFVSIVIALMLFLDITKLQAYIATGDNPDMAFSFGIHTGRME  
LMGLVLSNGVIALAGALIAQGEYADVSRGIGVIVVGLASLIIEGVIFKSLSLAERLVTVVGSIAVQFLVWAVIALGFNTSYLRLYS  
ALILAVCLMIPTFKQTIKGAKLSKZ

(SEQ. ID. NO. 149)

MKKMKVWSTVLATGVALTTLAACSGGSNSTASSSEKADKSQELVIYSNSVSNRGRDWLTAKAKEAGFNIKMVDIAGAQLADR  
VIAEKNNVADMVFGIGAVDSNKIRDQKLLVQYKPKWLDKIDQSLSDKDNYYNPVIVQPLVLIGAPDVKEMPKDWTELGSKYKG  
KYSISGLQGGTGRAILASILVRYLDDKELGVSEKGEVAKAYLKNAYTLQKGESSIVKMLDKEDPIQYGMWVGSALVGQKEQ  
NVVFKVMTPEIGVPFVTEQTMVLSTSKKQALAKEFIDWFGQSEIQVEYSKNFGSIPANKDALKDLPEDTKKFVDQVKPQNIDWEA  
VVGHLDEWKEAELEYVQZ

(SEQ. ID. NO. 150)

MIKFDNIQIKYGDFAIDNLNLDIHEGEFFTLGPGSGCKSTTLRALVGLFDPSSGSIEVNGTDVTHLEPEKRGIGIVFQSYALFPTMT  
VFDNIAFGLKVKVAPDVIAKVSAAKIKISDQQLQNRNVSELGGQQQRVALARALVLEPKILCLDEPLSNLDAKLRVDLRKL  
KRLQKELGITTYVTHDQEEALTSDRIA VFNNGYIEQVGTPEIYHNSQTEFVCDFIGDINVLTDETVEHVLLKNTSVFLEDKKGVI  
RLEKVRFNRETEQDFILKGTIIDVEFSGVTIHYTIKVSQSILNVTSDSQAIRSVGESVELFITPSDVLQFZ

(SEQ. ID. NO. 151)

MRHKLNLKDWLIRLGLIWFLVTFIYPNFDLVVNVFVKGGEFSLDAVHRVLKSQRALQSIMNSFKLAFSLIITVNVVGILCVLFTEYF  
DIKGAKILKGYMTSLIYGGVVLATGYKFVYGPYGLITKFLQNVIPSLDPNWFIFYGAVLFIMTFSGTANHTLFLTNTIRSVDYHTIE  
AARNMGAKPFTVFRKVVLPTLIPTLFALTIMVFLSGLSAVAAPMIVGGKEFQTINPMIITFAGMGNRDLAALLAIIILGIATTILLTIM  
NKIEKGGNYISISKTKAPLKKQKIASKPWNIIAHIVAYGLFTVFMPLIFIVLYSFTDPVAIQTGNLTLSNFTLENYRLFFSNSAAFPF  
LVSFYISIIAATTATILAVVFARVVRKHKSDFLFEYGALLPWLLPSTLLAVSLLFTFNQPQFLVLNQILVGSLVILLIAYIVVKIPFSY  
RMVRAILFSVDDMEDAARSMGASPFYTMVKVIFILPVVLSVIALNFNSLLTDFDLSVFLYHPLAQPLGITIRSAGDETATSNAQA  
LVFVYTTIVLMIISGTVLYFTQRPGRKVRKZ

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Table 3

**ID201 - 4106.4** (SEQ. ID. NO. 168)

ATGATAAAAAATCCTAAATTATTAACCAAGTCTTTTTTAAAGAAGTTTGGCAATTCTAGGTGGTGTGGTCTAGTCATTTCATAT  
AGCTATTTTATTTGACCTTTCTTTTTTATATATTCAACTGGAGGGGGAAAAAGTTTAATGAGAGCGCAAGAGTGTTCACGGAGT  
ATTTAAAGACTAAGACATCTGATGAAATTCCAAGCTTACTCCAGTCTTATTCAAAGTCCTTGACCATATCTGCTCACCTTAAA  
AGAGATATTGTAGATAAGCGGCTCCCTCTTGTCATGACTTGGATATTAAAGATGGAAAGCTATCAAATTATATCGTGATGTT  
AGATATGTCTGTGTAGTACAGCAGATGGTAAACAGGTAACCGTGCAATTTGTTACGGGGTGGATGTCTACAAAGAAGCAAGA  
ATATTTTGCTTTTGTATCTCCCATATACATTTTGGTTACAATTGCTTTTTCTTTGTTTTTCTATTTTTTATACTAAACGC  
TTGCTCAATCCTCTTTTACATTTCAGAAAGTGACTAGTAAAATGCAAGATTGGATGACAATATTCGTTTTGTAGAAAGTAG  
GAAAGATGAAGTTGGTGAAGTTGGAAGAACAGATTAAATGGTATGTATGAGCACTTGTGGAAGGTTATTTATGAGTTGGAAGTC  
GTAAATGAGCAAATTGTAAAATTGCAAAATCAAAGGTTTCTTTGTCCGCGGAGCATCACATGAGTTGAAAACCCCTTTAGCC  
AGTCTTAGAATTATCCTAGAGAATATGCAGCATAATATTGGAGATTACAAAGATCATCCAAAATATATTGCAAAGAGTATAAA  
TAAGATTGACCATGAGCCACTTATTAGAAGAAGTACTGGAGTCTTCTAAATTCCAAGAGTGGACAGAGTGTCTGTAGACCT  
TGACTGTTAAGCCAGTTTATAGTAGATATTTATCACGTTATCAAGAATTAGCTCATTCATAGGTGTACAATTGAAAAACAA  
TTGACAGATGCTACAGGGTGTGATGAGTCTTAGGGCATGGATAAGGTTTGGACAAACCTGATTAGTAATGCAATTAAATA  
TTCAGATAAAAAATGGCGGTGTAATCATATCCGAGCAAGATGGCTATCTCTTATCAAAAATACATGTGCGCCTCTAAGTGACC  
AAGAACTAGAACATTTATTTGATATATTCTATCATTCTCAATCGTGACAGATAAGGATGAAAGTCCGGTTTGGGTCTTTAC  
ATTGTGAATAATATTTTAGAAAGCTATCAAATGGATTATAGTTTCTCCCTTATGAACACGGTATGGAATTTAAGATTAGCTT  
GTAG

(SEQ. ID. NO. 152)

MIKNPKLLTKSFLRSFAILGGVGLVIHIAIYLTFFPYYIQLEGEKFNESARVFTYELKTKTSDEIPSLQSYSKSLTISAHLK  
RDIVDKRLPLVLDLIDKGKLSNYIVMLDSVSTADGKQVTVQFVHGVDVYKEAKNILLLYLPYTFVLVTIAFSFVFSYFYTKR  
LLNPLFYISEVTSKMQDLDDNIRFDESRRKDEVGEVKGQINGMYEHLKVIYELESRNEQIVKLQNKVSFVRGASHELKTPLA  
SLRIILENMQHNIQDYKHPKYIAKSINKIDQMSHLLLEEVLESSKFQEWTECRETLTVKPVLVLDILSRYQELAHSIGVTIENQ  
LTDATRVVMSLRALDKVLNLISNAIKYSDKNRVIIESEQDGYLSIKNTCAPLSDQLEHLFDIFYHSQIVTDKDESSGLGLY  
IVNNILESYQMDYSFLPYEHGMEFKISLZ

**ID202 - 4106.9** (SEQ. ID. NO. 169)

ATGGATAAAATTATTAATACTATATCAGAAAGCGGAGCCTTTCTGTGCTTTTGTCTTGATAGCACTGAAACCGTCCGCACTGC  
TCAAGAAAAACATCAAACCAAGCTAGCTCAACTGTAGCGCTTGGTTCGAACCTTATCGCTAGCCAGATTCTCGCAGCCAATG  
AAAAAGGAAATACCAAACTTACAGTTAAGGTGTTGGGATCTAGCTCTCTAGGTGCTATTATCACCGTCTGCTGATACCAAGGGG  
AACGTCAAAGGCTATGTTCAAATCCTGGTGTGACATCAAAAAGACTGCGACTGGTGAAGTCTTAGTCGGACCTTTTGTGTTG  
AAATGGTCAATTCCTCGTTATCACAGACTACGGTACTGGAATCCTTACAACCTTATAACTCCCTCATCTCTGGAGAAATCG  
GTGAAGACCTTGCTTTTACCTTACTGAAAGCAACAAACGCTTCAAGCGTCCGCTCAATGTCTCTTTGGACGAGGAAGAC  
AAGGTCAAGGTTGAGTGGTTTCTAGTTCAAGTCTTGCCAGGAGCAAGAAAGAGATTGCTCGCTTTGAAAAACGCAT  
CCAAGAAATGCCAGCTATCTCTACTCTTCTCGAAAGCGACGACCATATCGAAGCCCTCCTCAAGGCTATCTACGGGGACGAG  
CCTACAAGCGTCTTTCTGAAGAAGAAATCCGTTTCCAATGTGACTGTAGCCATGAACGCTTTATGAACGCTCTTGCCAGCCTT  
CCAAGCTCAGCTTACAGGAAATGAAAGAGGAAGACACGGGCGAGAAATCACTTGTCAATTCTGCCAACTACTTACAACCTT  
TGATGAAAAGGACCTGGAGGAACCTCATTCGTGACAAATCTTAA

(SEQ. ID. NO. 153)

MDKIIKTISESGAFRAFVLDDSTETVRTAQEKHQQTASSTVALGRTLIAAQILAANEKGNKLTIVKVLGSSSLGAIITVADTKG  
NVKGYVQNPVVDIKKTATGEVLVGPFGVNGQFLVITDYGTGNPNYSITPLISGEIGEDLAFYLTESQQTSAVGLNVLLDEED  
KVKVAGGFLVQVLPKAKKEEIAFEKRIQEMPAISTLLESDDHIEALLKAIYGDYKRLSEEEIRFQCDCSHERFMNALASL  
PSSDLQEMKEEDHGAETTCQFCQTTYNFDEKDLLELIRDSZ

**ID203 - 4115** (SEQ. ID. NO. 170)

ATGAAATCAATACTAAAAAGATTAAAGCAACTCTTGCAAGGAGTAGCTGCCTTGTGTTGAGTATTTGCTCCATCATTTGTATC  
TGCTCAAGAATCATCACTACCTGTTAAAGAAAGGTGATACACTTTAGAAATCGCTGAAACTCACACACAACAGTTGAAA  
AATTGGCAGAAAAACAACCATTTGATAACATTCATTTGATTTATGTTGATCAAGAGTTGGTTATCGATGGCCCTGTAGCGCT  
GTTGCAACACCAGCGCCAGCTACTTATGCGGCACCAGCCGCTCAAGATGAAACTGTTTCAGCTCCAGTAGCAGAACTCCAGT  
AGTAAGTGAAACAGTTGTTTCAACTGTAAGCGGATCTGAAGCAGAAAGCAAGAAATGGATCGCTCAAAAAGAAATCAGGTGGTA  
GTATACAGCTACAATGGACGTTATATCGGACGTTACCAATTA

(SEQ. ID. NO. 154)

MKSITKKIKATLAGVAALFAVPAPSFVSAQESSTYTVKEGDTLSEIAETHNTTVEKLAENNHNIDNIHLIYVDQELVIDGPVAP  
VATPAPATYAAPAAQDETVSAPVAETPVVSETVSVSGSEAEKEWIAQKESGGSIQQLQMDVISDVNTZ

**ID204 - 4117.1** (SEQ. ID. NO. 171)

ATGAATTTAGGAGAATTTTGGTACAATAAAATAAAGAACAGAGGAAGAAGGTTAATGAAGAAAGTAAGATTTATTTTTTT  
AGCTCTGCTATTTTCTTAGCTAGTCCAGAGGGTGCAATGGCTAGTGATGGTACTTGGCAAGGAAAACAGTATCTGAAAGAAG  
ATGGCAGTCAAGCAGCAAAATGAGTGGGTTTTGATACCTCATTTCAATCTTGGTTCTATATAAAGCAGATGCTAACTATGCT  
GAAAATGAATGGCTAAAGCAAGGTGACGACTATTTTACCTCAAATCTGGTGGCTATATGGCCAAATCAGAATGGGTAGAAGA  
CAAGGGAGCCTTTTATTACTTGAACCAAGATGGAAGAAATGAAAGAAATGCTTGGGTAGGAACTTCTATGTTGGTGAACAG  
GTGCCAAAGTACAAGAGTGGGTCTATGATTTCTCAATACGATGCTTGGTTTTATATCAAAAGCAGATGGACAGCAGCAGAG  
AAAGAATGGCTCCAAATTAAGGGAAGGACTATTATTTCAAATCCGGTGGTTATCTACTGACAAGTCAGTGGATTAATCAAGC  
TTATGTGAATGCTAGTGGTGCCAAAGTACAGCAAGGTTGGCTTTTGGACAAACAATACCAATCTTGGTTTTACATCAAGAAAA  
ATGGAACACTAGCTGATAAAGAAATGGATTTTCGAGAATGGTCACTATTATTTCTAAAAATCCGGTGGCTACATGGCAGCAAT  
GAATGGATTTTGGGATAAGGAATCTTGGTTTTATCTCAAATTTGATGGGAAAAATGGCTGAAAAAGAATGGGTCTACGATTCTCA  
TAGTCAAGCTTGGTACTACTTCAAATCCGGTGGTTACATGACAGCAATGAATGGATTGGGATAAGGAATCTTGGTTTTATC

TCAATCTGATGGGAAAAATAGCTGAAAAAGAAATGGGTCTACGATTCTCATAGTCAAGCTTGGTACTACTTCAAATCCGGTGGT  
TACATGACAGCCAATGAATGGATTGGGATAAGGAATCTTGGTTTACCTCAAATCTGATGGGAAAAATAGCTGAAAAAGAAATG  
GGTCTACGATTCTCATAGTCAAGCTTGGTACTACTTCAAATCTGGTGGCTACATGGCGAAAAATGAGACAGTAGATGGTTATC  
AGCTTGGGAAGCGATGGTAAATGGCTTGGAGGAAAAATACAAATGAAAAATGCTGCTTACTATCAAGTAGTGCTGTACAGCC  
AATGTTTATGATTAGATGGTGAAGGCTTCTCTATATATCGCAAGGTAGTGTGCTATGGCTAGATAAGGATAGAAAAAGTGA  
TGACAAGCGCTTGGCTATTACTATTTCTGGTTTGTGAGGCTATATGAAAAACAGAAGATTTACAAGCGCTAGATGCTAGTAAGG  
ACTTTATCCCTTATTATGAGAGTGTGCGCCACCGTTTTTATCACTATGTGGCTCAGAATGCTAGTATCCCAGTAGCTTCTCAT  
CTTTCTGATATGGAAGTAGGCAAGAAATATTTATTCGGCAGATGGCGCTGCATTTTGATGGTTTTAAGCTTGAGAATCCCTTCTCT  
TTTCAAAGATTTAACAGAGGCTACAACTACAGTGTGAAGAATTGGATAAGGTATTTAGTTTGTCTAAACATTAACAATAGCC  
TTTTGGAGAAACAAGGGCGCTACTTTTAAGGAAGCCGAAGAACATTACCATATCAATGCTCTTTATCTCTTGGCCATAGTGCC  
CTAGAAAGTAAGTGGGGAAGAAGTAAAAATGCCAAAGATAAGAATAATTTCTTTGGCATTACAGCCTATGATACGACCCCTTA  
CCTTTCTGCTAAGACATTTGATGATGTGGATAAGGGAATTTTAGGTGCAACCAAGTGATTAAGGAAAATTATATCGATAGGG  
GAAGAACTTTCTTGGAAACAAGGCTTCTGCTATGAATGTGGAATATGCTTCAGACCCCTTATTGGGGCGAAAAAATTGCTAGT  
GTGATGATGAAAATCAATGAGAAGCTAGGTGGCAAAGATTAG

(SEQ. ID. NO. 155)

MNLGEFYNKINKNRRLMKKVRFI FLALLFFLASPEGAMASDGTWQKGQYLKEDGSQAANEWVFDTHYQSWFYIKADANYA  
ENEWLKQDDYFYLKSGGYMAKSEWVEDKGAFYYLDQDGKMKRNAWVGTSYVGATGAKVIEDWVYDSQYDAWFYIKADGQHA  
KEWLQIKGKDYFKSGGYLLTSQWINQAYVNASGAKVQGWLFDKQYQSWFYIKENGNADKEWIFENGHYLLKSGGYMAAN  
EWIWDKESWFLKFDGKMAEKWVYDSHSQAWYFKSGGYMTANEWIWDKESWFLKSDGKIAEKWVYDSHSQAWYFKSGG  
YMTANEWIWDKESWFLKSDGKIAEKWVYDSHSQAWYFKSGGYMAKNETVDGYQLGSDGKWLKSWVVPVTA  
NVYDSGKELSYISQGSVWLDKDRKSDDKRLAITISGLSGYMKTEDLQALDASKDFIPYYESDGHRYFHYVAQNASIPVASH  
LSDMEVGKYYSDGLHFDGFKLENPFLFKDLTEATNYSAEELDKVFSLLNINNSLLENKGATFKEAEEHYHINALYLLAHS  
LESNWGRSKIAKDNFPGITAYDTPYLSAKTFDDVDKGI LGATKWKI KENYIDRGRF LFNKASGMNVEYASDPYWGKIAS  
VMMKINEKLGGKDZ

**ID205 - 4118.1** (SEQ. ID. NO. 172)

ATGAAAAAATTAGGTACATTACTCGTTCTCTTCTTTCTGCAATCATTCTTGTAGCATGTGCTAGCGGAAAAAAGATACAAC  
TTCTGGTCAAAAATAAAGTTGTTGCTACAACTCAATCATCGCTGATATTACTAAAAATATTGCTGGTGACAAAATTGACC  
TTCATAGTATCGTTCCGATTGGGCAAGACCCACACGAATACGAACCACTTCTGAGACGTTAAGAAAACTTCTGAGGCTAAT  
TTGATTTTCTATAACGGTATCAACCTTGAACAGGTGGCAATGCTTGGTTTACAAAATTGGTAGAAAAATGCCAAGAAAACTGA  
AAACAAAGACTACTTCGCGAGTCAGCGACGGCGTTGATGTTATCTACCTTGAAGGTCAAAATGAAAAAGGAAAAAGAGCCAC  
ACGCTTGGCTTAACCTTGAACCGGTATTATTTTGTCTAAAAATATCGCCAAACAATGAGCGCCAAAGACCCCTAACAAATAAA  
GAATTTCTATGAAAAAATCTCAAAGAATATACTGATAAGTTAGACAACTTGATAAAGAAAGTAAGGATAAATTTAATAAGAT  
CCCTGCTGAAAAGAAACTCATTGTAAACAGCGAAGGAGCATTCAAATACTTCTCTAAAGCCTATGGTGTCCCAAGTGCTTACA  
TCTGGGAAATCAATACTGAAGAAGAAGGAACCTCTGAACAAATCAAGACCTTGGTTGAAAACTTCGCCAAACAAAAGTTCCA  
TCTACTCTTTGTAGAATCAAGTGTGGATGACCGTCCAATGAAAACCTGTTTCTCAAGACACAAACATCCCAATCTACGCTCAAAT  
CTTTACTGACTCTATCGCAGAACAAAGGTAAAGAAGGCGACAGCTACTACAGCATGATGAAATACAACCTTGACAAGATTGCTG  
AAGGATTGGCAAAATAA

(SEQ. ID. NO. 156)

MKKLGTLVLFLSAIILVACASGKKDTSQGLKVVATNSIIADITKNIAGDKIDLHSIVPIGQDPHEYEPLPEDVKKTSEAN  
LIFYNGINLETGGNAWFKLVENAKKTENKDYFAVSDGVDVYILEGQNEKGKEDPHAWLNLENGIIIFAKNIAKQLSAKDPNNK  
EFYEKNLKEYTDKLDKDKESKDKFNKIPAEKKLIVTSEGAFFKYSKAYGVPSAYIWEINTEEEGTPEQIKTLVEKLRQTKVP  
SLFVESSVDDRPMKTVSQDTPNIPIYAQIFTDSTAEQKQEGDSYYSMMKYNLDKIAEGLAKZ

**ID206 - 4119.1** (SEQ. ID. NO. 173)

ATGGAATGGTATAAAAAATCGGACTTCTTGCACTACAGGTTTAGCTTTGTTTGGGCTCGGCGCTTGTCTCAACTATGGTAA  
ATCTGCGGATGGCAGAGTGACCATCGAGTATTTCAACCAGAAAAAGAAATGACCAAAACCTTGAAGAAATCACTCGTGATT  
TTGAGAAGGAAAAACCTTAAGATCAAGGTCAAAGTCGTCAATGTACCAATGCTGGTGAAGTATTGAAGACACGCGTTCTCGCA  
GGAGATGTGCTGATGTGGTCAATATTTACCCACAGTCCATCGAAGTCAAGAAATGGGCAAAAGCAGGTGTTTGAAGATTT  
GAGCAACAAAGACTACTGTAAACCGGTGAAAAATGGCTACGCTGAAACGAAAAATGCTGTAAACGAAAAAGTTTACAACGTTCTCT  
TTACAGCTAATGCTTATGGAATTTACTACAACAAGATAAATTCGAAGAAGTGGGCTTGAAGGTTCTGAAACCTGGGATGAA  
TTTGAACAGTTAGTCAAGATATCGTTGCTAAAGGACAAACACCATTTGGAATTGCAGGTGCAGATGCTTGGACACTCAATGG  
TTACAATCAATTAGCTTTGCGACAGCAACAGGTGGAGGAAAAAGAACAAATCAATACCTTCGTTATCTCAACCAATGCGCA  
TTAAATTGTGCGATCCGATTATGAAAGATGATATCAAGGTGATGGACATCCTTCGCATCAATGGATCTAAGCAAAAGAACTGG  
GAAGGTGCTGGCTATACCGATGTTATCGGAGCCTTCGCACGTGGGGATGTCTCATGACACCAAAATGGGTCTTGGGCGATCAC  
AGCGATTATGAACAAAAACCGAATTTAAGATTGGGACCTTATGATTCCAGGAAAAGAAAAAGGACAAAGCTTAACCCGTTG  
GTGCGGGAGACTTGGCATGTTCTCTAGCCACCACCAACATCCAAAAGAAGCCAAATGCCTTTGTGGAATATATGACCCGT  
CCAGAAGTCATGAAAAATACTACGATGTGGACGGATCTCCAACAGCGATCGAAGGGGTCAAACAAGCAGGAGAAGATTACC  
GCTTGTGCTGATGACCAATATGCCTTTACGGATCGTCACTTGGTCTGGTTGCAACAATACTGGACAGTGAAGCAGACTTCC  
ATACCTTGACCATGACCATGTCTTGACCGGTGATAAACAAGGCATGGTCAATGATTGTAATGCCTTCTTTAACCCTGATGAAA  
GCGGATGTGGATTAG

(SEQ. ID. NO. 157)

MEWYKKIGLLATTGLALFGLGACSNYKGSADGTVTIEYFNQKKEMTKLEEITRDFEKENPKIKVKVNVNPNAGEVLKTRVLA  
GDVPDVVNIYQSIELQEWAKAGVFEDLSNKDYLKRVKNGYAEKYAVNEKVVNVPFTANAYGIYYNKDKFEEGLKVPETWDE  
FEQLVKDIAVKGQTPFGIAGADAWTLNGYNQLAFATATGGGKEANQYLRYSQPNAIKLSDFIMKDDIKVMDILRINGSQKQNW  
EGAGYTDVIGAFARGDVLMTPNGSWAITAINEQKPNFKIGTFMIPGKEKGQSLTVGAGDLAWSISATTKHPKEANAFVEYMT  
PEVMQKYVDVDSPTAIEGVKQAGEDSPLAGMTEYAFTRHLVWLQYQWTSEADFHTLTMNYVLTGDKQGMVNDLNAFFNPMK  
ADVDZ

**ID207 - 4123.1** (SEQ. ID. NO. 174)

ATGAAGAAAAATCAAAACCGCATGGACCGTTACCAAGTCAGACTCAGCTAGCTTATCTGGGAGATGAACTAGCAGCTTTTATCCA  
CTTCGGTCTTAATACCTTTTATGACCAAGAAATGGGGACTGGACAGGAGGATCCTGAGCGCTTTAACCAGTCAAGTTGGATG  
CGCGTGAAGTGGGTTCTGTGTGCTCAAGGAAACGGGCTTCAAAAAGTTGATTTTGGTGGTCAAGCACCACGATGGCTTTGTCTCT  
TATCCGACAGCTCACACAGATTATTCGGTTAAGGTGATCCTTGGAGGAGAGGAAAGGGCGACTTGCTCTCTGAAGTATCCCA



AGTGCCACAGAGTTTGATATGGATATGGGGGTCTACCTGTACCGTGGGATGCCCATAGTCCCCTCTATCATGTGGACCGAG  
AAGCGGACTACAATGCCTATTATCTGGCTCAGTTGAAGGAAATCTTATCAAATCCTAACTATGGGAATGCTGGTAAGTTCGCT  
GAGGTTTGGATGGATGGTGCCAGAGGAGAGGGCGCGCAAAAGGTTAATTATGAATTTGAAAAATGGTTTGAAACCATTCGTGA  
CCTGCAGGGCGATTGCTTGTATTTTTCAACAGAGGACCAAGTATCCGCTGGATTGGCAATGAACGAGGGTATGCAGGTGATC  
CACTGTGGCAAAAGGTGAATCCTGATAAACTAGGAACAGAGAGCTGAACTATCTTCAGCACGGGGATCCCTCGGGCAGC  
ATTTTTTCAATCGGAGAGGAGATGTTTCCATCCGTCCAGGCTGGTTCTACCATGAGGATCAGGATCCTAAGTCTCTCGAGGA  
GTTGGTCAAAATCTACTTTCACTCAGTAGGGCGAGGAACCTCACTCTTGCTTAATATTCCGCCGAATCAAGCTGGGCTCTTTG  
ATGCAAGGATATTGAACGACTTTATGAATTTGCGACCTATCGCAATGAGCTCTATAAAGAAGATTGGCTCTGGGAGCTGAG  
GTATCTGGTCCAGCTCTTTCCGACAGCTTTGCTTGTGCCATTTGACAGACGGCTTGAGACCAGCTCTTGGGCAAGCGATGC  
AGACTTGCCCATCCAGTTAGAACTCGACTTAGGTTCTCCTAAAACTTTTGATGAATTTAGTTAAGAGAAGATTGAACTAG  
GGCAACGAATCGCTGCTTTTTCATGTGCAAGTAGAGGTGGATGGTGTCTGGCAGGAGTTTGGTTCCGGTCTACTGTTGGTTAC  
AAACGTCTCTTACGAGGAGCAGTTGTTGAGGCACAGAAGATACGTGTAGTCATTACAGAATCACAGGCTTTGCCTTTGTTGAC  
CAAGATTTCCCTTTTAAAACTCCTGGATTATCAAAAAAGAAAGTTGTTTCAGGAAGTAGCATTTCAGAAAAAGCCTAGCTG  
TGGCAAGGGGAGAAAACTCCTATTTTACAGTTAAGCGCAGAGAATGTAGTGGTCTTTAGAACTAAGATTTCGATTCAACCG  
GGACAGGTGTCCAGTGGTGTGCTGCTATCAGGATGAGATTCAAGTCTTGCCTTCAAACTGGTGAGACTGAAAAAGTCTGAC  
GCTACCAACCTTGTATTTCGAGGAGATAAAACCTTGGATTCTATCTGAACCTAACGGTGGATGGTCACTTGTGGATCAAC  
TTCAAGTCCAAGTTTCATAA

(SEQ. ID. NO. 158)

MKKIKPHGPLPSQTQLAYLGDLEAAFIHFGPNTFYDQEWGTQOEDPERFNPSQLDAREWVRVLKETGFKKLILVVKHHDGFVL  
YPTAHTDYSVKVSPWRRGKFDLLLEVSQAATEFYDMDMGVYLSPWDHSPLYHVDREADYNAYYLAQLKEILSNPNYGNAGKFA  
EVMMDGARGEGAQKVNVEFEKWFETIRDLQDCLIFSTEGTSIRWIGNERGYAGDPLWQKVNPDKLGEALNLYLQHGDPST  
IFSIGEADVSIRPGWFYHEDQDPKSLEELVEIYFHSVGRGTPLLNIPPNOAGLFDKADIERLYEFATYRNELYKEDLALGAE  
VSGPALSADFACRHLTDGLETSSWASDADLPIQLELDLGSPTFDVIELREDLKLQRIAAFHVQVEVDGVWQVEFGSGHTVGY  
KRLRGAAGVQAQKIRVYIETESQALPLLTKISLYKTPGLSKKEVVELEAFAEKSLAVAKGENAYFTVKRRECSGPLEAKISIQP  
GTGVHGVAYQDEIQVLAFQTGETEKSLLTPLYFAGDKTLDLYLNLTVDGQLVDQLQVQVSZ

**ID208 - 4125.12** (SEQ. ID. NO. 175)

ATGCTTGAAAGACTGAAAAGAATACATTATATGTTTGGATCAGTTTAATTTTTATGATTTTCCCCATCCTGTCTGTAGTGAC  
TGGGTGGCTTTCTGCCTGGCATTATTTGATTGATATTCTATTGTAGTGGCATATTTGGGTGTTTTAACTAAGAGCCAGC  
GCCTATCTTGGCTATATTGGGGCCTCATGCTGACTTATGTAGTTGGGAATACTGCCTTTGTTGCTGTTAATTATATCTGGTTT  
TTCTTTTCCATCCAACTCTCTTAAGTTATCATTTTCAGCGTACGTAGTTTAAAGTCTTTACATGTCTGGACTTTTCTTCTGTC  
TCAAGTCCTTGTGTGGGCAACTGTTGATTTTTCAGAGAATCGAAGTTGAGTTTCTATTCTATCTACTTGTAACTTCTTACTT  
TTGTCGATTTAATGACTTTTGGATTGGTTTCGATTTCGTATTGTGCGAGGATTGAAAGAAGCTCAGGTCAAGCAAAATGCTCAG  
ATAAATCTATTGCTTGTCTGAAAATGAACGTAGTCGTATCGGTACAGGATTGTCATGATAGTCTGGGACATACCTTTGCTATGCT  
GAGTGTCAAGACAGATTTAGCCTTGCAGTTATTTTCAGATGGAGGCTTATCCACAGGTGGAAGGAATTAAAGAAGATTTCACC  
AGATCAGCAAGGATCCATGA

(SEQ. ID. NO. 159)

MLERLKRIMFWISLIFMIFPILSVVTGWLAWHLLIDILFVAYLGVLTTKSQRSLWLYWGLMLTYVVGNTAFVAVNYIWF  
FFFLSNLLSYHFSVRSLSLHVWTFLLAQVLVVGQLLIFQRIEVEFLFYLLVILTFFVDMFTFGLVRIRIVEDLKEAQVKQNAQ  
INLLAENERSRIGQDLHDSLGHTFAMLSVKTDLALQLFQMEAYPQVEKELKEIHQISKDPZ

**ID209 - 4126.3** (SEQ. ID. NO. 176)

ATGAATGATAAGTTAAAACTCTTGTGTGCTAGGAGTATTTTTCTAGCCATAACCGGTTTCTATGTTCTATTGATACGAAA  
TGCAGGGCAGACAGATGCCTCGCAAATGAAAAGGCGGCAGTTAGCCAAGGAGGAAAAGCAGTGAAAAAACAGAAATTAGTA  
AAGACCGAGACTTGCACGAAATTTATCTAGCTGGAGGTTGTTTCTGGGGAGTGGAGGAATATTTCTCAGTGTTCGGGGGAGT  
ACGGATGCGGTTTTCAGGCTATGCAAATGGTAGAGGAGAAACCAAGTACGAATGATTAAACCAACAGGCTCATGCAAGAAC  
CGTCATGTACCTTACCTATGATGCAAGCAAAATTTCTCTCAAGGAAATCCTGCTTCACTATTTCCGCATTATCAATCCAACAGCA  
AAAATAAACAAGGAAATGATGTGGGGACCCAGTACCGTACTGGTGTATTACACAGATGACAAGGATTGGAAGTGATTAAAC  
CAAGTCTTTGATGAGGTGGCTAAGAAATACGATCAACCTCTAGCAGTTGAAAAGGAAAACTTGAAGAATTTTGTGGTGGCTGA  
GGATTACCATCAAGACTATCTCAAGAAAAATCCAAATGGCTACTGCCATATCAATGTTAATCAGGCGGCTATCCTGTCAATTG  
ATGCCAGCAATATCCAAACCAAGTGATGAGGAATTGAAAAAGACCTGTACCTGAGGAGTATGCAGTTACCCAGGAAAAAT  
CAACAGAACGAGCTTTCTCAAAACCGTTACTGGGATAAATTTGAATCCGGTATCTATGTGGATATAGCAACTGGGGAACCTCT  
CTTTTCAACAAAGCAAAATTTGAGTCTGGTTGTGGCTGGCCTGATTTTTACCACCAACCATCAGTCAAGTGTGTACCTTACA  
AGGAAGATAAGTCTTACAATATGACGCGTATGGAAGTGCGGAGCCGAGTAGGAGATTCTCACCTTGGGCATGTCTTTACGGAT  
GGTCCACAGGACAAGGGCGGCTTACGTTACTGTATCAATAGCCTCTCTATCCGCTTTATTCCCAAAGACCAATGGAAGAAAA  
AGGcTACGCTTATTTACTAGATTATGTTGATTAA

(SEQ. ID. NO. 160)

MNDKLIKIFLLGVFFLAITGFYVLLIRNAGQTDASQIEKAASVSGGKAVKKTEISKDADLHEIYLAGGCFWGVVEEYFSRVPV  
TDAVSGYANGRGETTKYELINQTHAETVHVYDAKQISLKEILLHYFRIINPTSKNKQGNVGTQYRTGVYYTDDKLEVIN  
QVFDEVAKKYDQPLAVEKENLKNFVVAEDYHQDYLLKKNPNGYCHINVNQAAYPIDASKYPKPSDEELKKTLSPEEYAVTQEN  
QTERAFSNRYWDFESGIIYVDIATGEPLFSSKDKFESGCGWPSFTQPISPDVVITYKEDKSYNMTRMEVRSRVGDSHLGHVFTD  
GPQDKGLRYCINSLSIRFIPKQMEKEGYAYLLDYVDZ

**ID210 - 4127.1** (SEQ. ID. NO. 177)

ATGAAAAAGAAATGGATGATTATGCTGCTTCTTCTAATGAATCTGCCGATGACAGTTTCATCTGATAAAGGAGACGGCGG  
TTTCGCTAGTCGTTTATTCACCAAACTCAGAGGGCTTAATTGGAGCAACTATTCCTGCCTTTGAAGAAAAATATGGTATCAAAG  
TAGAACTGATTCAAGCTGGTACTGGAGAACTTTTCAAAAACTAGAGTCAGAAAAAGAGTTCTGTAGCTGATGTTATCTTT  
GGTGGTTCTTATACAAATATACTACCCACGAGAACTCTTTGAAAACTATACTTCAAAAGAAAAATGATAATGTTATCAAAGA  
ATATCAAAAACAACACTGGCTACTCTACTCTTATACACTAGATGGTAGTGTGTTTTAATCGTCAACCCGTATTAACATAAGGCA  
TGAACATCGAAGGATATAACGATCTTTTCAAACTGAACTAAAAGGAAAAATCGCAACTGCTGACCCAGCAAACTCTTCTAGC  
GCCTTTGCTCAATTAACAAATATGCTACAAGCTCAAGGTGGTTACAAAGATGATAAGGCTTGGTCTTATGTAAAGATCTTTT  
CACACTTATTGATGGTAAAACTCGGTTCAAGTTCACTAGTGTCTATAAAGTAGTCGCTGATGGAGAAATGGCTTGGTCTCT  
CTTATGAAGATCCAGCAGTTAAACTCTTAAATGACGGAGCTTAACATTAAGGTAGTCTATCCAAAAGAGGAACCGTCTTCTTA  
CCTGCTAGTGTCTATCGTTAAAAAATCTAAAAATATGAAAAATGCCAAGAAATTTATCGATTTTATTATCTCTCAAGAAGT

ACAAGATACACTTGGTACAACCACTACTAACCGTCCTGTTTCGTAATAAATGCTAAAACAAGCGAAAACATGAAACCAATTGACA  
AAATCAAAACACTCACTGAAGATTATGATTATGTCATCAAGAATAAATCAGATATCGTTAAGAAATACAACGAAGTCTTTACA  
GATATCCAATCTAAACAGTAA

(SEQ. ID. NO. 161)

MKKKWMYYAACSSNESADDSSSDKGDGSLVVYSPNSEGLIGATIPAFEEKYGIKVELIQAGTGELFKKLESEKEVPVADVIF  
GGSYTQYTHGELFENYTSKENDNVIKEYQNTTGYSTPYTLDSVLI VNPDLTKGMNIEGYNDLFKPELKGKIATADPANSSS  
AFAQLTNMLQAQGGYKDDKAWSYVKDLFTLIDGKIGSSSSSVYKVVADGEMAVGLSYEDPAVKLLNDGANIKVVYPKEGTVFL  
PASAAIVKSKNMENAKKFIIDFIIISQEVQDTLGTTTTNRPVRKNAKTSENMKPIDKIKTLTEDYDVIKNKSDIVKKYNEVFT  
DIQSKQZ

**ID211 - 4127.2** (SEQ. ID. NO. 178)

ATGAGTGAGATCAAAATTATTAACGCCAAAAAATCTACCACGATGTCCCTGTTATTGAGAATTTGAACATTACAATTCCAAA  
AGGAAGTCTCTTTACCTTCTTGGAGCTTCAGGATGTGGGAAAAACGACCCTTCTTCGTATGATTGCAGGTTTCAACAGTATCG  
AAGGTGGAGAATTTTACTTTCGATGATACAAAAATCAATAATATGGAACCCAGCAACGCAATATCGGGATGGTTTTCCAAAAC  
TACGCTATTTTCCACATTGACTGTCCGAGACAACGTTGCTTTTGGTCTTATGCAAAGAAGGTTCCAAAAGAAGAATTGAT  
TCAACAGACCAACAAGTATCTTGAACATGCAAAATGCTCAATATGCGGATCGAAAGCCCCGATAAACTCAGTGGTGGACAAAC  
AACCAAGTGTACCTTGGCATGCGCCTTAGCGGTTAATCCAAGTGTCTCTCATGGACGAGCCACTAGTAATCTGGAGGCC  
AACTTCGCTTGGATATGCGTCAAGCCATCCGAGAAATCCAACAGAAAGTGGGAATTACAACCTGTTTATGTAACCCACGACCA  
AGAAGAAGCCATGGCTATTTAGACCAAAATGCTGTTATGAAAGATGGGGTGATCCAACAAATCGGCCGACCAAAAGAAGCTCT  
ATCATAAAACAGCTAATGAGTTTGTGGCAACCTTTATCGGACGCACAAATATTATCCCTGCCAATCTTGAAGAACGAGCGAC  
GGCGCTTATATCGTCTTTTCAGATGGCTATGCCCTTCGAATGCCAGCTCTTGATCAGGTTGAGGAGCAAGCTATTCATGTAAAG  
CATTCGTCGCGAAGAGTTTATCAAAGATGAATCTGGAGATATTGAAGGAAGTATTAGAGATAGCGTCTATCTTGGACTAAATA  
CGGATTATTTTCATTGAGACAGGTTTTCCTCAAAAATTCAGTTAGTGAAGAATCAACTTTTGAAGAAGATCTACAAAAGGC  
AATCGTATTCGTCAGAAATCAATACGCCAAAAATTAACATCTTTCTGCAGATGGTTCCTCAAAACCTGATAAAAGGAGTCAA  
CCATGGAACGTAA

(SEQ. ID. NO. 162)

MSEIKIINAKKIYHDPVPIENLNITIPKGSFLTLGASGCGKTTLLRMIAGFNSIEGGEFYFDDTKINNMEPSKRNIGMVFNQ  
YAFPHLTVRDNVAFGLMQKVPKEELIQQTNKYLELMQIAQYADRPDKLSGGQQQVRVTLACALAVNPVLLMDEPLSNLEA  
KLRLDMRQAIRESIQHEVGITTVYVTHDQEEAMASDQIAVMKDGVIQOIGRPKELYHKPANEVATFIRGTNIIPANLEKRS  
GAYIVFSDGYALRMPALDQVEEQAIHVSIRPEEFIKDESGDIEGTIRDSVYLGLNTDYFIETGFASKIQVSEESTFEEDLQKG  
NRIRLRINTQKLNIFADGSQNLIKGVNHGTZ

**ID212 - 4136.1** (SEQ. ID. NO. 179)

ATGAAGAAAAAATTATTGGCAGGTGCCATCACACTATTATCAGTAGCAACTTTAGCAGCTTGTTCGAAAGGGTCAGAAGGTGC  
AGACCTTATCAGCATGAAAGGGGATGTCAATTACAGAACATCAATTTTATGAGCAAGTGAAAAGCAACCCTTCAGCCCAACAAG  
TCTTGTTAAATATGACCATCAAAAAGTTTTGAAAAACAATATGGCTCAGAGCTTGATGATAAAGAGGTGATGATACTATT  
GCCGAAGAAAAACAATATGGCGAAAACTACCAACGCTGCTTGTCAAGCAGGTATGACTCTTGAACACAGTAAAGCTCA  
AATTCGTACAAGTAAATTAGTTGAGTTGGCAGTTAAGAAGGTAGCAGAAGCTGAATTGACAGATGAAGCCTATAAGAAAGCCT  
TTGATGAGTACACTCCAGATGTAACGGCTCAAAATCATCCGCTCTTAATAATGAAGATAAGGCCAAAGAAGTTCTCGAAAAAGCC  
AAGCGAAGGTGCTGATTTTGCTCAATTAGCCAAAGATAATTCAACTGATGAAAAACAAGAAAGTGTGGAGAAATTAC  
CTTTGATCTGCTTCAACAGAAGTACCTGAGCAAGTCAAAAAAGCCGCTTTTCGCTTTAGATGTGGATGGTGTCTTCTGATGTGA  
TTACAGCAACTGGCACACAAGCCTACAGTAGCCAATATTACATTGTAAAACTCACTAAGAAAAACAGAAAAATCATCTAATATT  
GATGACTACAAAGAAAAATTAAGAACTGTTATCTTGACTCAAAAACAAGATGATTCAACATTTGTTCAAAGCATTATCGGAAA  
AGAATTGCAAGCAGCCAATATCAAGGTTAAGGACCAAGCCTTCCAAAATATCTTTACCCAATATATCGGTGGTGGAGATTCAA  
GCTCAAGCAGTAGTACATCAAACGAATAG

(SEQ. ID. NO. 163)

MKKKLLAGAITLLSVATLAACSKGSEGADLISMKGDVITEHQFYEQVKSNPQAQQVLLNMTIQKVFKEQYSELDDKEVDDTI  
AEEKQYQENYQRVLSQAGMTLETRKAQIRTSKLVELAVKKVAEAELEDEAYKAFDEYTPDVTAQIIRLNNEDKAKEVLEKA  
KAEGADFAQLAKNDKTKENGGEITFDSASTVEPQVKKAFALDVGSDVITATGTQAYSSQYIYVKLTKKTEKSSNI  
DDYKEKLKTVILTQKQNDSTFVQSIIGKELQANIKVKDQAFQNIPTQYIGGGDSSSSSSTSNEZ

**ID213 - 4137.3** (SEQ. ID. NO. 180)

ATGAAAAAATATTAACAATATGTAACCTTAGGTACTGTAGTGGTATTATCAGCATTTGTTGCTAACTCAGTTGCAGCTCA  
GGAGACTGAAACTTCTGAAGTATCAACACCAAGTTGGTGCAACCTGTTGCACCAACGACTCCGATTTCCGGAAGTACAACCTA  
CATCGGATAACTCTTCGGAAGTTACTGTACAACCTCGAACAGTTGAAACTACTGTTAAGGATCCATCTTCTACAGCGGAAGAA  
ACTCCTGTCTTAGAAAAAATAATGTTACTTTAACAGGGGGCGGAGAAAAATGTTACTAAAGAGTTAAAGGATAAAATTTACTAG  
CGGTGACTTTACTGTAGTGATTAAGTACAATCAGTCAAGTGAGAAAGGCTTACAAGCTCTGTTTGAATATCTAATTTCAAAC  
CCGGTCAACAAAATAGTTATGTAGATGTGTTCTTAGAGACAATGGTGAGTTGGGGATGGAAGCGCGTACTTCTTCCAAT  
AAAAATAACCTAGTATCCAGACCTGCTTCAAGTTTGGGGTAAGTACAACAAGAGGCTGTGACTAACACTGTTGGAGTAAGC  
AGATTCAAGTCAAAAAACATATTTCTTATACGCAAAATGGTACAAAAGTAGTAAAAAGAAAGTGGATAATTTCTTAAACATCA  
AGGATATTAAGGTATTGATTAATATATGCTTGGGGGAGTGAACGCTGCAGGAAAAACGGCGTTTGGTTTTAACGGAACACTA  
GAAAATATCAAATTTCTTAATAGTGCATTGGATGAAGAACTGTTAAAAAGATGACAACAAACGCTGTTACTGGACATTTAAT  
TTATACGGCTAATGATACAACAGGTTCTAATATTTCGGTATTTCAGTTCTGTATACTTTTAGCAATGGTGGGATTTTCAA  
GCATTGACGCTCGTTACGGTGAACCTCATGATTTCTTGAATAAAATTAATATTGCTACAAGTTATAGTGATGATAATGGTAAG  
ACATGGACTAAACCAAAATTAACATTGGCATTCGATGATTTTGCAGCAGTACCATTAGAATGGCCTCGTGAAGTTGGTGGACG  
TGACTTACAAATCAGCGGTGGTGGCAACCTATATTGACTCTGTTATTGTTGAAAAAAGAAACAACAGTACTCATGTTTTCGCTG  
ATGTGATGCTGCTGGAGTAAGTTTTAGAGAAGCAACTAGAAAAGATTGAGGTTATAAACAAATTTGATGGTAATTATTACCTT  
AAATTAAAGGAAACAAGGTGATACTGATTACAATTATACTATTCGTGAGAATGGTACTGTATACGACGATCGTACCAACAGACC  
AATGAATTTTCAGTAGATAAAATTTCCGTATTAAACAAAATGGTAATTATTGACGGTAGAGCGG

(SEQ. ID. NO. 164)

MKKNIKQYVTLGTVVVLSAFVANSVAAQETETSEVSTPKLVQVPVAPTPPISEVQPTSDNSSEVTQVQRTVETTVKDPSSSTAEETPVLEKNVTLTGGENVTKELKDKFTSGDFTVVIKYNQSSSEKGLQALFGISNSKPGQONSVDVFLRDNELGMEARDTSSNKNLVSRRPASVWGKYQEAVTNTVAVVADSVKKTYSLYANGTKVVEKKVDNPLNFKDIDYMLGGVVKRAGKTAFGFNGTL ENIKFNSALDEETVKKMTTNAVGTGHLIYTANDTTGSNYFRI PVLYTFSNGRVFSSIDARYGGTHDFLNKINIATSYSDDNGLK TWTKPKLTLAFDDFAPVPLEWPREVGGRDLQISGGATYIDSVIVEKKNQVLMFADVMPAGVSFREATRKDSGYKQIDGNYYL KLRKQGD TDYNTIRENGTVYDDRTNRPTFEVSVDKNFGIKQNGNYLTVER

**ID214 - 4185 (SEQ. ID. NO. 181)**

ATGAAAAAATTTAGCCTATTACTAGCTATCCTACCATTTTTGGTTGCCTGTGAGAATCAAGCTACACCCAAAGAGACTAGCGC TCAAAAGACAATCGTCCTTGCTACAGCTGGCGACGTGCCACCATTTGACTACGAAGACAAGGGCAATCTGACAGGCTTTGATA TCGAAGTTTTAAAGGCAGTAGATGAAAACTCAGCGACTACGAGATTCAATCCAAAGAACCCTGGGAGAGCATCTTCCCA GGACTTGATTCTGGTCACTATCAGGCTGCGGCCAATAACTTGAGTTACACAAAAGAGCGTGCTGAAAAATACCTTTACTCGCT TCCAAATTTCCAACAATCCCCCTCGTCCTTGTCAGCAACAAGAAAAATCCTTTGACTTCTCTTGACCAGATCGCTGGTAAAACAA CACAAGAGGATACCGGAACCTTCTAACGCTCAATTCAATAACTGGAATCAGAAACACACTGATAATCCCGCTACAATTAAT TTTTCTGGTGAGGATATTGGTAAACGAATCTAGACCTTGCTAACGGAGAGTTTGATTTCCTAGTTTTTGACAAGGTATCCGT TCAAAAGATTATCAAGGACCGTGGTTTAGACCTCTCAGTCGTTGATTTACCTTCTGCAGATAGCCCCAGCAATTATATCATTT TCTCAAGCGACCAAAAAGAGTTTTAAAGAGCAATTTGATAAAGCGCTCAAAGAACTCTATCAAGACGGAAACCTTGAAAACTC AGCAATACCTATCTAGGTGGTTCTTACCTCCAGATCAATCTCAGTTACAATAA

**(SEQ. ID. NO. 165)**

MKKFSLLLAILPFLVACENQATPKETSAQKTIVLATAGDVPPFDYEDKGNLTGFDIEVLKAVDEKLSDEYIEQFORTAWESIFP GLDSGHYQAAANNLSYTKERAKEYLYSLPISNNPLVLVSNKNPLTSLDQIAGKTTQEDTGTSTNAQFINNWNQKHTDNPATIN FSGEDIGKRILDLANGEFDLFLVDKVSQKIKDRGLDLSVVDLPSADSPSNYIIFSSDQKEFKEQFDKALKELYQDGTLEKL SNTYLGGSYLPDQSQLQZ

**ID215 - 4211.1 (SEQ. ID. NO. 182)**

ATGAAAAAATAGTTTATATATCATATCCTCACTCTTTTTTGTCTGTGCTTATTTGTCTATGCTACGGCGACGAATTTTCA AAACAGTACCAGTGTAGGCAGGTAAAAACGGAAACCTATACCTAATACAGTAACAAATGTCCCTATTGCATACGCTATAATA GTGATAAGTATTTTATAGCGGTTTTGTCTCAGAAAGTATCAGTGGTCTTGACTGGTGCAAATCGCCTATCGCTAGCTAGTGAA ATGCAAGAAAGTACACGTAAATTCAAGGTTACTGCTGACCTAACAGATGCCGGTGTGGAACGATTGAAGTTCCTTTGAGCAT TGAAGATTTACCCAATGGGCTGACCGCTGTGGCGACTCCGCAAAAAATTACAGTCAAGATTGGTAAGAAGGCTCAGAAGGATA AGGTAAAGATTGTACCAAGAGATTGACCCCTAGTCAAATTGATAGTCGGGTACAAATTGAAAATGTCATGGTGTGAGATAAAGAA GTGTCTATTACGAGTGACCAAGAGACATTGGATAGAATTGATAAGATTATCGCTGTTTTGCCAACTAGCGAACGTATAACAGG TAATTACAGTGGTTTCACTACCTTTGCAGGCAATCGACCGCAATGGTGTGTCTTACCGGCAGTTATCACTCCGTTTGATACAA TAATGAAGGTGACTACAAAACCAAGTACGACCAAGTTCAAGCATCAAATTCAGTACAAGCAGTTTCATCGGAGACATCTTCG TCAACGAAAGCAACTAGTTCAAAAACGAATTAA

**(SEQ. ID. NO. 166)**

MKKNSLYI ISSLFFACVLFVYATATNFQNSTSARQVKTYTNTVTNVPIDIRYNSDKYFISGFASEVSVVLGTANRLSLASE MQESTRKFVKTADLTDAVGVTIEVPLSIEDLPNGLTAVATPQKITVKIGKKAQDKVKIVPEIDPSQIDSRVQIENVMVSDKE VSITSDQETLDRIDKIIAIVLPTSERITGNYSGSVPLQAI DRNGVVLPAVITPFDITMKVTTKPVAPSSSTSNSSTSSSSETSS STKATSSKTNZ

**ID216 - 4127.3 (SEQ. ID. NO. 183)**

ATGTTGATTGGCGAAGGGTATCGGACTTTCCCTGTCTGATTATATACCCAATTTATAGCGAGGTTGGAGGAAATTTCTGCTTT TGCAATTATGGCGATTATCATTGCCTTGGCAATTTTCCTTATCCAAAAACACATTGCAAACCGCTACAGTTTCAGCATGAATC TGCTCCATCCAATTGAGCCTAAAAAACTACAAAAGGAAAAATGGCTGCCATTTATGCAACAGTCTACGGAATTATCTTTATC TCTGTTTTACCTCAATCTACTTAATTTATACCTCTTTCTAAAAACATCAGGTATGGTATCTGTTAAAGGTTATTCTCCAAA CAGTTACAAGGTAGCTTTCCATCGTATGGGATCTGCTATTTTCAATACCATTCTGATCCCTTTGATTGCCTTAGTTCTAGTTG TTCTATTTGCGACATTATCTCCTACCTAGCCGTTAGAAAACGGAATTTGTTTACAACTTAATTGACAGCCTCAGTATGGTA CCTTATATTGTACCAGGAACCGTTCTAGGGATTGCCTTCATTCTTCTTCAATACTGGTCTATTTGGAAGTGGATTCTTAT GATTACAGGGACTGCTTTCATCTTGATTATGTCTCTATCTGCCAGAAGATTACCTTATACTATTCCGTCATCTGTTGCTAGCT TACAACAAATAGCACCAAGTATTGAAGAAGCTGCTGAAAGCTTAGGAAGTAGTCGTCTCAATACCTTTGCTAAGATTACAACCT CCAATGATGCTATCTGGTATCATTTCTGGAGCCATCTTATCTTGA

**(SEQ. ID. NO. 167)**

MLIGEGYRTFPVLIYTFQFISEVGGNSAFAIMAIIIALAIFLIQKHIANRYSFSMNLHPIEPKKTTKGKMAIYATVYGIIFI SVLPQIYLIYTSFLKTSGMVSVKGYSPNSYKVAFHRMGSATFNTIRIPLIALVLVLFATFISYLAVRKRNLFTNLIDSLSMV PYIVPGTVLGIAFISSFNTGLFGSGFLMITGTAFILIMSLSARRLPYTIRSSVASLQQIAPSIIEEAESLGSSRLNTFAKITT PMMLSGIISGAILSZ

Table 4

**ID301** (SEQ. ID. NO. 196)

ATGAATAAGAAAAAATGATTTTAAACAAGTCTAGCCAGCGTCGCTATCTTAGGGGCTGGTTTTGTTACGTCTCAGCCTACTTT  
 TGTAAGAGCAGAAGAATCTCCACAAGTTGTCGAAAAATCTTCATTAGAGAAGAAATATGAGGAAGCAAAAGCTGATA  
 CTGCCAAGAAAGATTACGAAACGGCTAAAAAGAAAGCAGAAGACGCTCAGAAAAAGTATGAAGATGATCAGAAGAGAACTGAG  
 GAGAAAGCTCGAAAAGAGCAGAAGCATCTCAAAAATTGAATGATGTGGCGCTTGTGTTCAAAATGCATATAAAGAGTACCG  
 AGAAGTTCAAAATCAACGCTAGTAAATATAAATCTGACGCTGAATATCAGAAAAAATTAACAGAGGTCGACTCTAAAATAGAGA  
 AGGCTAGGAAAGAGCAACAGGACTTGCAAAAATAATTTAATGAAGTAAGAGCAGTTGTAGTTCTGAAACCAATGCGTTGGCT  
 GAGACTAAGAAAAAGCAGAAGAAGCTAAAGCAGAAGAAAAAGTAGCTAAGAGAAAAATATGATTATGCAACTCTAAAGGTAGC  
 ACTAGCGAAGAAAGAGTAGAGGCTAAGGAACTTGAAATTGAAAAAATTCAATATGAAATTTCTACTTTGGAACAAGAAGTTG  
 CTACTGCTCAACATCAAGTAGATAATTTGAAAAAATTCTTGTGCTGGTGGGATCCTGATGATGGCACAGAAGTTATAGAAGCT  
 AAATTAAGAAAAAGGAGAGCTGAGCTAAACGCTAAACAAGCTGAGTTAGCAAAAAACAAACAGAAGCTTGAAAAAATTCTTGA  
 CAGCCTTGATCCTGAAGGTAAGACTCAGGATGAATTAGATAAAGAAGCAGAAGAAGCTGAGTTGGATAAAAAAGCTGATGAAC  
 TTTCAAAATAAAGTTGCTGATTTAGAAAAAGAAATTAGTAACCTTGAAATATTACTTTGGAGGGGCTGATCCTGAAGATGATACT  
 GCTGCTCTTCAAAATAAATTAGCTGCTAAAAAGCTGAGTTAGCAAAAAACAAACAGAAGCTTGAAAAAATTCTTGACAGCCT  
 TGATCCTGAAGGTAAGACTCAGGATGAATTAGATAAAGAAGCAGAAGAAGCTGAGTTGGATAAAAAAGCTGATGAACCTTCAAA  
 ATAAAGTTGCTGATTTAGAAAAAGAAATTAGTAACCTTGAAATATTACTTTGGAGGGGCTGATTTCTGAAGATGATACTGCTGCT  
 CTTCAAAATAAATTAGCTACTAAAAAGCTGAATTGGAAGAACTCAAAAAGAATTAGATGCAGCTCTTAATGAGTTAGGCCC  
 TGATGGAGATGAAGAAGAACTCCAGCGCGGCTCCTCAACAGAGCAACAGCTCCTGCACCAAAACAGAGCAACAGCTC  
 CAGCTCCAAAACAGAGCAACAGCTCCTGACCAAAACAGAGCAACAGCTCCTGCAAAACAGAGCAACAGCTC  
 GCTCCAAAACAGAGCAACAGCTAAGCGCGAGCAACAGCTGAGAGGCTACTCAACAGAAAAACAGGCACTCCAAAAAC  
 AGGCTGGAACAAGAAACGGTATGTGGTATTTCTACAATCTGATGGTTCAATGGCAATAGGTTGGCTCCAAAAACAGCGTT  
 CATGGTACTAAGCTAACCGCTAACGGCGCTATGGCAACAGGTTGGGTGAAGATGGAGATACCTGGTACTATCTTGAAGCATCA  
 GGTGCTATGAAGAAGCAAGCAATGGTTCAAGTATCAGATAAAGTGGTACTATGCTCAACAGCAATGGCGCTAGGCGACAGGCTG  
 GCTCCAATACAATGGCTCATGGTACTACCTCAACGCTAATGGTGATATGGCGACAGGATGGCTCCAATACAACGGTTTATGGT  
 ATTACCTCAACGCTAATGGTGATATGGCGACAGGATGGGCTAAGCTCAACGGTTTATGGTACTACCTAAGCTAACGGTGTCT  
 ATGGCTAAGCTTGGGCTAAGCTCAACGGTTTATGGTACTACCTAAGCTCAACGGTTTCAATGGCAAGCTTGGGTGGAAGA  
 TGGAGATACCTGGTACTATCTTGAAGCATCAGGTGCTATGAAAGCAAGCAATGGTTCAAAGTATCAGATAAATGGTACTATG  
 TCAATGGCTTAGGTGCCCTTGCAGTCAACACAAGCTGTAGATGGCTATAAAGTCAATGCCAATGGTGAATGGGTTAA

## (SEQ. ID. NO. 184)

MNKKKMLTSLASVAILGAGFVTSQPTFVRAEESPOVVEKSSLEKKYEEAKAKADTAKKDYETAKKKAEDAOKKYEDDQKRTE  
 EKARKEAEASQKLNVDVALVQNAVKEYREVQNRSKYKSDAEYQKLLTEVDSKIEKARKEQDQLQNFNEVRVVVPEPNALA  
 ETKKKAEBAKAEKVKARKYDYATLKVALAKKEVEAKELEIEKLQYEISTLEQEVATAQHVDNLKLLAGADPDDGTEVIEA  
 KLKKGAEELNAKQAEALAKKQTELEKLKLLDPEGKTQDELDEKEAEELDKKADELQNKVADLEKEISNLEILLGGADPEDDT  
 AALQNKLAAKKAEALAKKQTELEKLKLLDPEGKTQDELDEKEAEELDKKADELQNKVADLEKEISNLEILLGGADSEDDTAA  
 LQNKLATKKAELKTELKELDAALNELGPDGDEETPAAPAPQEPAPAPKPEQAPAPKPEQAPAPKPEQAPAPKPEQAPAP  
 APKPEQAPKPEKPAEPTQPEKPAATPKTGWKQENGWYFYNTDQSGMAIGWLQNGSWYYLNGAMATGWVKDGDWYYLEAS  
 GAMKASQWFKVSDKWYVNSNGAMATGWLQYNGSWYYLNGAMATGWLQYNGSWYYLNGAMATGWAKVNGSWYYLNGA  
 MATGWAKVNGSWYYLNGAMATGWVKDGDWYYLEASGAMKASQWFKVSDKWYVNLGALAVNTTVDGYKVNANGEWVZ

**ID302** (SEQ. ID. NO. 197)

ATGTTTGCATCAAAAAGCGAAAGAAAGTACATTATTCAATTCGTAAATTTAGTGTGGAGTAGCTAGTGTAGTTGTTGCCAG  
 TCTTGTATGGGAAGTTGGTTTCATGCGACAGAGAACGAGGAGCTACCCAAAGTACCCACTTCTTCTAATAGGGCAAATGAAA  
 GTCAGGCAGAACCAAGGAGAACCACTAAAAAATCGATTAGAACGAGATAAGGCAAGGAAAGAGGTCGAGGAATATGTAAAA  
 AAAATAGTGGGTGAGAGCTATGCAAAATCACTAAAAAGCAGACATACAATTAAGTGTAGCTCTAGTTAACGAGTTGAACAACAT  
 TAAGAACGAGTATTTGAATAAATAGTTGAATCACTCAGAACGCAACTACAGATACTGATGATGAGCTGATCAAAAG  
 TAGATGAAGCTGTGTCTAAGTTTGAAGAGGACTCATCTTCTTGTGCAAGTTTCAAGACTCTTCCACTAAAGCGGAAGCTTCAGAT  
 ACAGCGAAGCCAAACAAGCCGACAGAACCGAGGAGAAAGGTAGCAGAAGCTAAGAGAAGGTTGAAGAAGCTGAGAAAAAAGC  
 CAAGGATCAAAAAGAAGAGTTCGTCTAATACCAACGCTTACTTACAAAACGCTTGAAGTTGCTGAGTCCGATG  
 TGGAAAGTTAAAAAGCGGAGCTTGAAGCTAGTAAAAAGTAAAGCTTAACGAACCTCGAGACGAGCAAAAATTAAGCAAGCAGAA  
 GCGGAAGTTGAGAGTAAACAAGCTGAGGCTACAAGGTTAAAAAATCAAGACAGATCGTGAAGAAGCAGAAGAAGAAGCTAA  
 ACGAAGAGCAGATGCTAAGAGCAGGTAACCAAGGGGCGGCAAAACGAGGAGTTCTTGGAGAGCTAGCAACACCTGATA  
 AAAAGAAATGATGCGAAGTCTTCAAGTTCTAGCTAGGTTAGGAGAACTCTTCCAAAGCCATCCTTCCAAAGCCAAAG  
 GTAGCAGAAGCTGAGAAGAAGGTTGAAGAAGCTAAGAAAAAGCCGAGGATCAAAAAGAAGAAGATCGCCGTAACCTACCAAC  
 CAATACTTACAAAACGCTTGAAGTTGAAATTGCTGAGTCCGATGTGGAAGTTAAAAAGCGGAGCTTGAAGTAAAGAGG  
 AAGCTAAGGAACCTCGAAACGAGGAAAAAGTTAAGCAAGCAAAAGCGGAAGTTGAGAGTAAAAAGCTGAGGCTACAAGGTTA  
 GAAAAATCAAGACAGATCGTAAAAAAGCAGAAGAAGCTAAGCAAGGAGCAGCAGAAGAAGTAAAGTTAAAGAAAAAAC  
 AGCTGAACAACCAACAGCGCGGCTCCAAAAGCAGAAAAACAGCTCCAGCTCCAAAACAGAGAATCCAGCTGAACAAC  
 CAAAAGCAGAAAAACAGCTGATCAACAAGCTGAAGAAGCTATGCTCGTAGATCAGAAGAAGAATATAATCGCTTGACTCAA  
 CAGCAACCGCCAAAAATGAAAAACAGCAACCACTTACTCCAAAAACAGGCTGGAACAAGAAAAACGGTATGTGGTACTT  
 CTACAATACTGATGGTTCAATGGCGACAGGATGGCTCCAAAACAATGGCTCATGGTACTACCTCAACAGCAATGGCGCTATGG  
 CGACAGGATGGCTCCAAAACAATGGTTTATGGTACTACTAAGCTAATGGTTCAATGGCAACAGGATGGCTCCAAAACAAT  
 GGTTCATGGTACTACTAAGCTAAGCTAATGGTTCAATGGCGACAGGATGGCTCCAAATACAATGGCTCATGGTACTACCTAAGC  
 TAATGGTTCAATGGCGACAGGATGGCTCCAAATACAATGGCTCATGGTACTACCTAAGCTAATGGTGATATGGCGACAGGTT  
 GGGTGAAGATGGAGATACCTGGTACTATCTTGAAGCATCAGGTGCTATGAAAGCAAGCCAATGGTTCAAAGTATCAGATAAA  
 TGGTACTATGTCAATGGCTCAGGTGCCCTTGCAGTCAACACAAGCTGTAGATGGCTATGGAGTCAATGCCAATGGTGAATGGT  
 AAATAA

## (SEQ. ID. NO. 185)

MFASKSERKVHYSIRKFSVGVASVVVASLVMGSVVHATENEGATQVPTSSNRANESQAEQGEQPKKLDSEDKARKEVEEYVK  
 KIVGESYAKSTKKRHTITVALVNELNNIKNEYLNKIVESTSESQQLILMMESRSKVDEAVSKFEKDDSSSSSSSDSSTKPEASD  
 TAKPNKPTPEKVAEAKKKVEAEKKAKDKQEDRRNYPTITYKTLELEIAESDVEVKKAELELVKVKANEPREPKIKQAE  
 AEVESQAEATRLKKIKTDREEAEAEAKRRDAKEQKPKGRKRKRVGELATPDKKENDAKSSDSSVGEETLPSPLKPEKK  
 VAEAEKKVEEAKKAEEDQKEDRRNYPTNYKTLELEIAESDVEVKKAELELVKEEAKPEPRNEEKVKQAKAEVESKKAETRL  
 EKIKTDRKKAEEAEAKRAEEDKVKEKPAEQPAPAPKAEKPAAPKPAENPAEQPAEKPADQAEEDYARRSEEEYNRLTQ

QPPKTEKPAQPSTPKTGWKQENGWYFYNTDGSMTAGWLQNNGSWYYLNSNGAMATGWLQNNGSWYYLNSNGMATGWLQNN  
GSWYYLNSNGMATGWLQYNGSWYYLNSNGMATGWLQYNGSWYYLNSNGDMATGWVKDGDWTWYLEASGAMKASQWFKVSDK  
WYYVNGSGALAVNTTVDGYGVNANGWVNZ

**ID303**(SEQ. ID. NO. 198)

ATGGTAAAAAGACGTATAAGGAGAGGGACGAGAGAACCTGAAAAAGTTGTTGTTCTGAGCAATCATCTATTCTCTTCGTATCC  
TGTATCTGTTACATCTAACCAAGGAACAGATGTAGCAGTAGAACAGCTAAAGCAGTTGCTCCAACAACAGACTGGAACAAG  
AAAAATGGTATGTGGTATTTTATAAATACTGATGGTTCCATGGCAACAGGTTGGGTACAAGTTAATAGTTCATGGTACTACCTC  
AACAGCAACGGTCTATGAAAGTCAATCAATGGTTCCAAGTTGGTGGTAAATGGTATTATGTAAATACATCGGGTGAGTTAGC  
GGTCAATACAAGTATAGATGGCTATAGAGTCAATGATAATGGTGAATGGGTGCGTTAA

## (SEQ. ID. NO. 186)

MVKRRIRRGRTREPEKVVVPEQSSIPSYFVSVTNSQGTDAVEPAKAVAPTDDWKQENGWYFYNTDGSMTAGWVQVNSSWYYL  
NSNGSMKVNQWFQVGGKYYVNTSGELAVNTSIDGYRVNDNGEWVRZ

**ID304**(SEQ. ID. NO. 199)

CTGAATACAAGTTTGTTCATGCTGCTGATGGGATTCAATATGTCAGAGATGATACTAGAGATAAAGAAGAGGGAATAGAGTA  
TGATGACGCTGACAATGGGGATATTATTGTAAAAGTAGCGACTAAACCTAAGGTAGTAACCAAGAAAAATTTCAAGTACGCGAA  
TTCGTTATGAAAAAGATGAAACAAAAGACCGTAGTGAAAAATCCTGTTACAATTGATGGAGAGGATGGCTATGTAACACGACA  
AGGACCTACGATGTTAATCCAGAGACTGGTATGTTACCGAACAGGTTACTGTTGATAGAAAAGAAGCCACGGATACAGTTAT  
CAAAGTTCAGCTAAAAGCAAGGTTGAAGAAGTTCTTGTTCCATTGCTACTAAATATGAAGCAGACAAATGACCTTTCTGCAG  
GACAGGAGCAAGAGATTACTTAGGAAAGAAATGGGAAAACAGTTACAACGATAAATTATAATGTAGATGGAAGAGAGTGGACAA  
GTAACGTAGAGTACTTTAAGTCAAAAAAAGACTCTCAACAAGAGTTGTTAAAAAAGAACCAAGCCCCAAGTTCTTGTTCCA  
AGAAATTCGAATCGAAACAGAATATCTCGATGGCCCAACTCTTGATAAAAGTCAAGAAGTAGAAGAAGTAGGAGAAATTGGTA  
AATTACTCTTACTACAATCTATACTGTAG

## (SEQ. ID. NO. 187)

LNTSFVHAADGIIQYVRDDTRDKEEGIEYDDADNGDIIKVKATKPKVVTKKISSSTRIRYEKDETKDRSENPTIDGEDGYVTTT  
RTYDVPNPETGYVTEQVTVDRKEATDTVIKVPKSKVEEVLVPFATKYEADNDLSAGQEIEITLGKNGKTVTTITYNVDDGKSGQ  
VTESTLSQKKDSQTRVVKRTRKQVLVQEIPIETEYLDGPTLDKSQEVVEEVEIGKLLLLQSLZ

**ID305** (SEQ. ID. NO. 200)

ATGAAGCTTTTGAAAAAATGATGCAATCGCACTAGCCACATTTTCTTCGGTTTGTAGCGACAAATACAGTATTTGCAGA  
TGATTCTGAAGGATGGCAGTTTGTCCAAGAAAAATGGTAGAACCTACTACAAAAAGGGGGATCTAAAAGAAACCTACTGGAGAG  
TGATAGATGGGAAGTACTATTATTTTGATCCTTTATCCGGAGAGATGGTTGTTCGGCTGGCAATATATACCTGCTCCACACAAG  
GGGGTTACGATTGGTCTCTCTCCAAGAATAGAGATTGCTCTTAGACCAGATTGGTTTATTTTGGTCAAGATGGTGTATTACA  
AGAATTTGTTGGCAAGCAAGTTTGTAGAAGCAAAACTGCTACGAATACCAACAACATCATGGGGAAGAATATGATAGCCAAG  
CAGAGAAACGAGTCTATTATTTTGAAGATCAGCGTAGTTATCATACTTTAAAAAAGTGGTTGATTATGGAAGAGGGTCATTGG  
TATTATTACAGAAGGATGGTGGCTTTGATTTCGCGCATCAACAGATTGACGGTTGGAGAGCTAGCACGTGGTTGGGTTAAGGA  
TTACCTCTTACGTATGATGAAGAGAAGCTAAAAGCAGCTCCATGGTACTATCTAAATCCAGCAACTGGCATTATGCAACAG  
GTTGGCAATATCTAGGTAATAGATGGTACTACCTCCATTGCTCAGGAGCTATGGCAACTGGCTGGTATAAGGAAGGCTCAACT  
TGGTACTATCTAGATGCTGAAAATGGTGATATGAGAAGTGGCTGGCAAAACCTTGGGAACAAATGGTACTATCTCCGTTTCATC  
AGGAGCTATGGCAACTGGTTGGTATCAGGAAAGTTGCACTTGGTACTATCTAAATGCAAGTAATGGAGATATGAAAAACAGGCT  
GGTTCCAAGTCAATGGTAACTGGTACTATGCCTATGATTCAAGTGCTTTAGCTGTTAATACCACAGTAGGTGGTTACTACTTA  
AACTATAATGGTGAATGGGTTAAGTAA

## (SEQ. ID. NO. 188)

MKLLKMMQIALATFFFLATNTVFADDSEGWQFVQENGRYYKKGDLKETYWRVIDGKYYYFDPLSGEMVVGWQYIIPAPHK  
GVTIGPSPIEIALRPDWFYFGQDGVLEFVGKQVLEAKTATNTNKHGEEYDSQAEKRVYFYFEDQRSYHTLKTGWIYEEGHW  
YYLQKDGGFDSRINRLTVGELARGWVKDYPLTYDEEKLKAAPWYYLNPATGIMQTGWQYLGNRWYYLHSSGAMATGWYKEGST  
YYLDAENGDMRTGWQLGNKWWYLRSSGAMATGWYQESSTWYYLNASNGDMKTGWQVNGWYAYDSGALAVNTTVGGYYL  
NYNGEWVKZ

**ID306**(SEQ. ID. NO. 201)

TTGGCTGGTAGATATGGTTCTGCTGTTCACTGATACAGAAGTGACTGCCTCAAACCTTTCAACAGTTAAACCTAAAGCTACGGT  
TGTAAGAAAACCACTGAAAGATTTTAGAGCGTCTACGTCTGATCAGTCTGGTTGGGTGGAATCTAATGGTAAATGGTATTTCT  
ATGAGTCTGGTGTATGTAAGACAGGTTGGGTGAAAAACAGATGGTAAATGGTACTATTGAAATGACTTAGGTGTATGCAGACT  
GGATTGTAAAATTTTCTGGTAGCTGGTATTACTTGAGCAATCAAGTGCTATGTTTACAGGCTGGGGAACAGATGGTAGCAG  
ATGGTTCTACTTTGACGGCTCAGGAGCTATGAAGACAGGCTGGTACAAGGAAAATGGCACTTGGTATTACCTTGACGAAGCAG  
GTATCATGAAGACAGGTTGGTTTAAAGTCGGACCACACTGGTACTATGCCTACGGTTTCAGGAGCTTTGGCTGTGAGCAACA  
ACACCAGATGGTTACCGTGTAAATGGTAAATGGTGAATGGGTAAACTAG

## (SEQ. ID. NO. 189)

LAGRYGSVQCTEVTASNLSTVKTKATVVEKPLKDFRSTSDQSGWVESNGKWYFYESGDVKTGWVKTDGKYYLNDLGVMQT  
GFVKFSGSWYYLNSNGAMFTGWGTDGSRWFYFDGSGAMKTGWYKENGWYLLDEAGIMKTGWFKVGPWHYAYGSGALAVSTT  
TPDGYRVNNGEWVNZ

**ID307** (SEQ. ID. NO. 202)

ATGAAAAATTTGAAAAAATGCAAGTTGGACTGACAGTATTTTCTTTGGTTTGTAGGGACCAGTACAGTATTTGCAGA  
TGATTCTGAAGGATGGCAGTTTGTCCAAGAAAACGGAAGAACCCTACTACAAAAAGGGGGACCTCAAAGAAACCTACTGGCGAG  
TGATTGTAGGTAAGTACTATTATTTTGATTCTCTATCTGGAGAGATGGTTGTTCGGCTGGCAATATATCCCGTTTCCATCTAAA  
GGTAGTACAATTTGGTCTTACCCAAATGGTATCAGATTAGAAGGTTTCCAAAGTCAGAGTGGTACTACTTTCGATAAAAAATGG  
AGTGCTACAAGAGTTTGTGGTTGGAAAACATTAGAGATTAAACCTAAAGACAGTGTGGAAGAAAGTACGGGGAAAAACGCTG  
AAGATTGCAAGATAAAGAAGAGAAGCGTTATTATACGAATATTACTTTAATCAAAATCATTCTTTAGAGACAGGTTGGCTT  
TAGATGAGTCTAAGTATTATCTAGCTAAGACGGAATTAATGGAGAAAACCTACCTTGGTGGTGAAAGACGCTGCGGGGTG  
GATAACGATGATTGCACTTGGTACTACCTAGATCCAACAACCTGGTATTATGCAACAGGTTGGCAATATCTAGGTAATAAGT

GGTACTACCTCCGTTCTCAGGAGCAATGGCCACTGGCTGGTATCAGGAAGGTACCACTTGGTATTATTTAGACCACCCAAAT  
GGCGATATGAAAACAGGTTGGCAAAACCTTGGGAACAAATGGTACTATCTCCGTTTCATCAGGAGCTATGGCAACTGGTTGGTA  
TCAAGATGGTTCAACTTGGTACTACCTAAATGCAGGTAATGGAGACATGAAGACAGGTTGGTCCAGGTCAATGGCAACTGGT  
ACTATGCTTATAGCTCAGGTGCTTTGGCAGTGAATACGACCGTAGATGGCTATTCTGTCAACTATAATGGCGAATGGGTTCCG  
TAA

(SEQ. ID. NO. 190)

MKILKKTMOVGLTVFFFLGLTSTVFADDSEGWQFVQENGRITYYKKGLKETYWRVIDGKYYYFDSLSEGMVVGWQYIIPFPSK  
GSTIGPYPNGIRLEGFPKSEWYFFDKNGVLQEFVWGKLTLEIKTKDSVGRKYGEKREDSKKEKRYTNYFNQNHSLGTGWL  
YDQSNWYLLAKTEINGENYLGGERAGWINDSTWYLLDPTTGIMQTGWQYLGKWWYLRSSGAMATGWYQEGTWTWYLLDHPN  
GDMKTGWQNLGNKWYLRSSGAMATGWYQDGTWYLLNAGNGDMKTGWQVNGNWYAYSSGALAVNTTVDGYSVNYNGEWVR  
Z

**ID308** (SEQ. ID. NO. 203)

ATGAAAAAGAAATTAAGTACTAGTTTAGCACTTGTAGGCGCTTTTGTAGGTTTGTCTATGGTATGGGAATGTTTCAGGCTCAAGAAAG  
TTCAGGAAATAAAATCCACTTTATCAATGTTCAAGAAGGTGGCAGTGTATGCGATTATTTCTTGAAGCAATGGACATTTTGCCA  
TGCTGGATACAGGAGAGATTATGATTTCCAGATGGAAGTATTCTCGCTATCCATGGAGAGAAGGAATTGAAACGCTCTTAT  
AAGCATGTTCTAACAGACCGTGTCTTTCTGCTGTTGAAGGAATTGGGTGTCCAAAACTTGATTTTATTTGGTGACCCATAC  
CCACAGTGATCATATTGGAATGTTGATGAATTACTGTCTACCTATCCAGTTGACCGAGTCTATCTTAAGAAATATAGTGATA  
GTCGTATTACTAATTTGAACGCTCTATGGGATACTGTATGGCTATGGAAGTTTACAGACTGTCGAGAAAAAGGTGTT  
TCAGTTATTCAAAATACACACAAGGGGATGCTCATTTTCAGTTTGGGGACATGGATATTTCAGCTCTATAATTATGAAATGA  
AACTGATTCATCGGGTGAATTAAGAAAAATTTGGGATGACAAATCCAATTCCTTGATTAGCGTGGTGAAGTCAATGGCAAGA  
AAATTTACCTTGGGGGCGATTTAGATAATGTTTCATGGAGCAGAAGACAAGTATGGTCTCTCATTTGAAAAAGTTGATTTGATG  
AAGTTTAATCATCACCATGATACCAACAAATCAAAATACCAAGGATTTCAATAAAAATTTGAGTCCGATTTGATTGTTCAAAC  
TTCGGATAGTCTACCTTGGAAAAATGGTGTGATAGTGAGTATGTTAATTGGCTCAAAGAACGAGGAATTGAGAGAATCAACG  
CAGCCAGCAAAGACTATGTCACACAGTTTGTGATATTCGAAAAGACGGTTTTGTCAATATTTCAACATCCTACAAGCCGATT  
CCAAGTTTCAAGCTGGTTGGCATAAGAGTGCATATGGGAACCTGGTGGTATCAAGCGCTGATTCTACAGGAGAGTATGCTGT  
CGGTTGGAATGAAATCGAAGGTGAATGGTATTACTTTAACCAACCGGTATCTTGTACAGAATCAATGGAATAATGGAACA  
ATCATTTGGTTCTATTTGACAGACTCTGGTGTCTGCTAAAAATTTGGAAGAAAAATCGCTGGAATCTGGTATTATTTTAAACAA  
GAAACACAGATGGAATTTGGTTGGATTCAAGATAAAGAGCAGTGGTATTATTTGGATGTTGATGGTTCTATGAAGACAGGATG  
GCTTCAATATATGGGGCAATGGTATTACTTTGCTCCATCAGGGGAAATGAAATGGGCTGGGTAAAGATAAAGAAACCTGGT  
ACTATATGGATTCTACTGGTGTCTATGAAGACAGGTGAGATAGAAGTTGCTGGTCAACATTATTATCTGGAAGATTTCAGGAGCT  
ATGAAGCAAGGCTGGCATAAAAAGGCAATGATTGGTATTTCTACAAGACAGACGGTTTCACGAGCTGTGGGTTGGATCAAGGA  
CAAGGATAAATGGTACTTCTTGAAAGAAAAATGGTCAATTACTTGTGAACGGTAAGACACCAGAAGGTTATACTGTGGATTCAA  
GTGGTGCCTGGTTAGTGGATGTTTCGATCGAGAAATCTGCTACAATTAAACTACAAGTCATTACAGAAATAAAGAATCCAAA  
GAAGTAGTGAAAAAGGATCTTGAAATAAAGAAACGAGTCAACATGAAAGTGTACAAATTTTCAACTAGTCAAGATTGAC  
ATCCTCAACTTCACAAAGCTCTGAAACGAGTGTAACAAATCGGAATCAGAACAGTAG

(SEQ. ID. NO. 191)

MKKKLTSLALVGAFGLGSWYGNVQAQESSGNKIHFINVQEGGSDAIILESNHFMAMVDTGEDYDFPDGSDSRYPWREGIETSY  
KHVLTRVFRRLKELGVQKLDLILVTHTHSDHIGNVDELLSTYPVDRVYLKKYSDSRIITNSERLWDNLGYDKVLQTAEEKGV  
SVIQNIQTQDAHFQFGDMDIQLYNYENETDSSGELKKIWDNNSNLSVVKVNGKKIYLGGLDLDNVHGAEDKYGPLIGKVDLM  
KFNFHHHTNKSNTKDFIKNLSPLIVQTSDSLPLWKNVDSYQYVNWKLKERGIERINAASKDYDATVPDIRKDGFTVNIISTYKPI  
PSFQAGWHKSAYGNWYQAPDSTGEYAVGWNEIEGEWYFNOYGLLQNWKKWNHWFYLTDSGASAKNWKKIAGIWIYFKN  
ENQMEIGWIQDKEQWYLLDVGSMKTGWLQYMGQWYFAPSSEMKGWVKDKETWYMDSTGVMKTGEIEVAGQHYLLEDSGA  
MKQGWKKANDWYFYKTDGSRVAGWIKDKDWYFLKENGQLLVNGKTPGYTVDSSGAWLVDVSIKESATIKTTSHSEIKESK  
EVVKKDLENKETSQHSVTNFTSQDLTSSTSSQSSSVNKSESEQZ

**ID309** (SEQ. ID. NO. 204)

ATGGAAATTAATGTAGTAAATTAAGAACAGATTTGCCTCAAGTCGGCGTGCAACCATATAGGCAAGTACACGCACACTCAAC  
TGGGAATCCGCAATCAAGCTACAGAATGAAGCGGATTATCACTGGCGGAAAGACCAGAATTAGGTTTTTCTCGCACATTG  
TTGGGAACGGTTGCATCATGCAGGTAGGACCTGTTGATAATGGTGCCTGGGACGTTGGGGCGGTTGGAATGCTGAGACCTAT  
GCAGCGGTTGAAGTATTGAAAGCCATTCAACCAAGAAAGAGTTTCATGACGGACTACCGCCTTTATATCGAACTCTTACGCAA  
TCTAGCAGATGAAGCGTTTGGCGAAAACGCTTGATACAGGAGTTTACGCTGGAATTAACACGCACGAGTATTGACGCAATA  
ACCAACCAAAACCACTCAGACCAGCTTGACCCTTATCCATATCTTGCTAAATGGGGCATTAGCCGTGAGCAGTTTAAGCAT  
GATATTGAGAACGGCTTGACGATTGAAACAGGCTGGCAGAAGAATGACACTGGCTACTGGTACGTACATTCAGACGGCTCTTA  
TCCAAAGACAAGTTTGAGAAAAATCAATGGCACTTGGTACTACTTTGACAGTTTCAGGCTATATGCTTGACAGCCGTGGAGGA  
AGCACACAGACGGCAACTGGTACTGGTTTCGACAACCTCAGGCGAAATGGCTACAGGCTGGAAGAAAAATCGCTGATAAGTGGTAC  
TATTTCAACGAAGAAGGTGCCATGAAGACAGGCTGGGTCAAGTACAAGGACACTTGGTACTACTTAGACGCTAAAGAAGGCGC  
CATGGTATCAAATGCCTTTATCCAGTCAGCGGACGGAACAGGCTGGTACTACCTCAAACAGACGGAACACTGGCAGACAAGC  
CAGAATTACAGTAGAGCCAGATGGCTTGATTACAGTAAATAA

(SEQ. ID. NO. 192)

MEINVSRLRDLPLQVGVQPYRQVHAHSTGNPHSTVQNEADYHWRKDPGLGFFSHIVNGNCIMQVGPVDNGAWDVGWNAET  
AAVELIESHSTKEEFMTDYRLYIELLRNLADEAGLPKLTDTGSLAGIKTHEYCTNNQPNHSDHVDYPYLAKEWISREQFKH  
DIENGLTIEGTWQKNDTGWYVHSDGSYPKDKFEKINGTWYFYFDSGYMLADRWRKHTDGNWYWFNDSGEMATGWKKIADKWY  
YFNEEGAMKTGWVKYKDTWYLLDAKEGAMVSNFIQSADGTWYLLKPDGTLADKPEFTVEPDGLITVKZ

**ID310** (SEQ. ID. NO. 205)

ATGGGCACAACAGGATTTACAATAATTGACTTAATTATCTTGATTGTTTATTTACTTGCGGTGTTGGTTGCAGGTATCTATTT  
CTCTAAAAAAGAGATGAAAGGAAAGAGTTCTTTAAAGGAGATGGTTCGGTTCTTGGTATGTTACTTCGGTATCCATTTTGT  
CCACAATGCTCAGTCCGATTTCCTTCTTGGGACTCGCTGGTAGCTCTTATGCAGGTAGCTGGATTTTATGGTTTGTCTCAATTA  
GGGATGTTAGTAGCTATTTCACTGACAATTCGTTTATCTTACCTATCTTTGCACGGATAGACATCGATACGGCATATGATTA  
CTTGATAAACGTTTAAATCTAAAGCACTTCGTATTATTTACGACACTCTTGTATTATTTATCAATTTGGGACGTATGTCTA  
TCATTATGTACCTCCATCAGTGGTTTATCAGTATTGACAGGAATGACATCAATATTTTATTATTTTATGATGGGTGTAGTT  
GCAATTGTTTATTCTTACTGGTGGTCTAAAAACCGTATTATGGACAGACTTTATTCAAGGTGTGATTCTGATTAGTGGTGT



CGTTTACGTTTATTGTACTGATTGCTAATATTAAAGGTGGCTTTGGTGCAGTAGCAGAAACATTAGCAAACGGGAAATTCC  
 TTGCTGCAAATGAAAACTTTTCGATCCTAAGTTCCTTTCAAACCTCCATCTTTTAAATTGTGATGGGTTTCAGGCTTTACAATC  
 TTGTCTTCTATGCTTTCATCTCAAGATTGGTTTCAACGTTTACTACACACAAAATATTAAAGAACTTAATAAGATGTTGTT  
 CACAAACGGTGTGTTTGTCACTTGCACCTGCAACAGTCTTTTACTGATTGGTACAGGCTTGTACGTATTCTATCAAGTACAAA  
 ATGCAGATAGTGCAGCTAGCAATATCCCTCAAGACCAAATCTTTATGTACTTTATTGCATACCAGTTACCAGTAGGTATCACA  
 GGTGTTGATCTTGGCAGCGATTATGTCAGCATCTCAATCAACTATTTCAACAGGTTTGAACCTCTGTTGCAACTTCATGGACATT  
 GGATATTCAAGATGTCATTCTTAAAAATATGTGAGACAATCGTCTGACGAAATTTGCACAATTCGTATCTCTAGCAGTAGGTT  
 TATTCTCAATTGGTGTGTTCCATTGTCATGGCTCACTCAGATCATTAATCTGCATACGAATGGTTCAATAGTTTCATGGGACTT  
 GTACTTGGTCTACTTGGTGGTGTATTTATCTTGGATTGTTTCTAAAAAAGCAAATAAACAAGGTGCTTATGCAGCGCTGAT  
 TGTATCAACCATCGTCATGGTATTTATTAATACTTCTCTTCTCAACAGCTGTTAGCTACTGGGCATATTCAATTGATTTCAA  
 TCTCTGTATCAGTAGTTTCAAGTTATATGTATCTGTTCTTACTGGAAATAAGTATCTGCACCTAAATATACAACGATTTCAT  
 GATATTACAGAAATTAAAGCGGATTCAAGTTGGGAAGTTCGTCATAA

(SEQ. ID. NO. 193)

MGTTGFTIIDLIIILVYLLAVLVAGIYFSKKEMKKEFFKGDGVSVPWYVTSVSIFATMLSPISFLGLAGSSYAGSWILWFAQL  
 GMVVAIPLTIRFILPIFARIDIDTAYDYLDKRFNSKALRIISALLFIYQLGRMSIMYLPASGLSVLTGIDINILIIIMGVV  
 AIVSYTGGGLKSVLWTFIQGVILISGVVLLALFVLIANIKGGFGAVAETLANGKFLAANEKLPDNLNSNIFLIVMGSVGTI  
 LSSYASSQDLVQRFTTTQNIKKLNKMLFTNGVLSLATATVFLIIGTGLYVFYQVQNADSAASNIPQDQIFMYFIAYQLPVGIGT  
 GLILAAIYAASQSTISTGLNSVATSWTLDIQDVISKMSDNRRRTKIAQFVSLAVGLFSIGVSIVMAHSDIKSAYEWFNSFMGL  
 VLGLLGGVFIILGFVSKKANKQGAYAAALIVSTIVMVFIIKYFLPPTAVSYWAYSLSISVSVSVSGYIVSVLTGNKVSAPKYTTIH  
 DITEIKADSSWEVRHZ

**ID311** (SEQ. ID. NO. 206)

ATGAAAATTAATAAAAAATCTAGCAGGTTCACTGGCAGTCCCTTGGCCTAAGTGTTTGTCTCTATGAGCTTGGTCTGCACCA  
 AGTGGTCAGGATAAGAAAGAGTCTAATCGAGTTGCTTATATAGATGGTGATCAGGCTGGTCAAAGGCAGAAAACCTTGACAC  
 CAGATGAAGTCAGTAAGAGGGAGGGGATCAACGCCGAACAAATCGTCATCAAGATTACGGATCAAGGTATGTGACCTCTCAT  
 GGAGACCATTAATCTATATAATGGCAAGGTCCCTTATGATGCCATCATCAGTGAAGAGCTCCTCATGAAGATCCGAATTA  
 TCAGTTGAAGGATTGTCAGATGTTCAATGAAATCAAGGGTGGTTATGTCTCAAGGTAGACGGAATACTATGTTTACCTTA  
 AGGATGCAGCTCATGCGGATAATATTCGGACAAAAGAAGAGATTAAACGTCAGAAGCAGGAACGCAGTCATAATCACGGGTCA  
 GGAGCTAACGATCATGTCAGTAGCTGCAGCCAGAGCCCAAGGACGCTATACAACGGATGATGGGTATATCTTCAATGCATCTGA  
 TATCATTGAGGACACGGGTGATGCTTATATCGTTTCTCACGGCAGCATTACCATTAATTCTTAAGATGAGTTATCAGCTA  
 CGGAGTTAGCTGCTGCAGAGCCTATTGGAATGGGAAGCAGGAGTCTGCTCCTTCTCAAGTTCTAGTTATAATGCAAAATCCA  
 GCTCAACCAAGATTGTGAGAGAACCACAATCTGACTGTCACTCAACTTATCATCAAAATCAAGGGGAAAACATTTCAAGCCT  
 TTTACGTGAATTGTATGTAAACCTTATCAGAACGCCATGTGGAATCTGATGGCCTTATTTTCGACCCAGCGCAATCACAA  
 GTCGAACCCGAGAGGTGATGCTGCTCCCTCATGGTAACCATTAACCATTTATCCCTTATGAACAAATGCTGAATTGGAAAAA  
 CGAATTGCTCGTATTATTTCCCTTCTGTTATCGTTCAAACCATTTGGGTACCAGATTCAAGACCAGAACCAAGTCCACAATC  
 GACTCCGGAACCTAGTCCAAGTCCGCAACCTGCACCAATCTCAACAGCTCCAGCAATCCAATTGATGAGAAATTTGGTCA  
 AAGAAGCTGTTTCGAAAAGTAGGCGATGGTTATGTCTTTAGGAGAATGGAGTTTCTCGTTATATCCCGCAAGGATCTTTCA  
 CGAGAAACAGCAGCAGGCAATTGATAGCAAACTGGCCAAGCAGGAAAGTTTATCTCATAAGCTAGGAGCTAAGAAAACCTGACCT  
 CCCATCTAGTGATCGAGAAATTTACAATAAGGCTTATGACTTACTAGCAAGAATTACCAAGATTTACTTGATAATAAAGGTC  
 GACAAGTTGATTTTGGAGCTTTGGATAACCTGTGGAACGACTCAAGGATGTCCCAAGTGATAAAGTCAAGTTAGTGGATGAT  
 ATTCTTGCCTTTTAGCTCCGATTCTGTCAGAACGTTTAGGAAAAACCAATGCGCAAAATTACCTACACTGATGATGAGAT  
 TCAAGTAGCCAAGTTGGCAGGCAAGTACACAACAGAAGACGGTTATATCTTTGATCCTCGTGATATAACAGTGATGAGGGGG  
 ATGCCCTATGTAACCTCCATATGACCCATAGCCACTGGATTAAAAAAGATAGTTTGTCTGAAGCTGAGAGAGCGGCAGCCAG  
 GCTTATGCTAAAGAGAAAAGGTTTGACCCCTCCTTCGACAGACCATCAGGATTACAGGAAATACAGGCAAGGATGAGGACG  
 TATCTACAACCGCGTGAAAGCAGCTAAGAAGGTGCCACTTGATCGTATGCCTTACAATCTTCAATATACTGTAGAAGTCAAAA  
 ACGGTAGTTTAACTATACCTCATTATGACCATTAACATAACATCAAATTTGAGTGGTTTGACGAAGGCCCTTATGAGGCACCT  
 AAGGGGTACTCTTTGAGGATCTTTTGGCGACTGTCAAGTACTGTGCAACATCCAAACGAACGCTCCGATTCAGATAATGG  
 TTTTGGTAACCTAGCGACCATGTTCAAAGAAAACAAAATGGTCAAGCTGATACCAATCAAACGGAAAAACCAAGCGAGGAGA  
 AACCTCAGACAGAAAAACCTGAGGAAGAAACCCCTCGAGAAGAGAAACCGCAAAGCGAGAAACAGAGTCTCCAAAACCAACA  
 GAGGAACCAAGAAATCACCAGAGGAATCAGAAGAACCTCAGGTCGAGACTGAAAAGGTTGAAGAAAACTGAGAGAGGCTGA  
 AGATTTACTTTGAAAAATCCAGGATCCAATTATCAAGTCCAATCGCAAGAGAGACTCTACAGGATTAAAAAATAATTTACTAT  
 TTGGCACCCAGGACAACAATACTATTATGTCAGAAAGCTGAAAAACTATTGGCTTTATTAAGGAGAGTAAGTAA

(SEQ. ID. NO. 194)

MKINKKYLAVSVAVLALSVCSYELGRHQAGQDKKESNRVAYIDGDAQGQKAENLTPDEVSKREGINAEQIVIKITDQGYVTS  
 GDHYHYNGKVPYDAIIESELLMKDPNYQLKDSIDVNEIKGGYVIKVDGKYVYLKDAHADNIRTKKEIKRQKQERSHNHGS  
 GANDHAAVAAARAQGRYTTDDGYIFNASDIIEDTGDAYIVPHGDHYHYPKNELASSELAAEAAYWNGKQGRSPSSSSYANP  
 AQRPLENHNLTPTTYHQNGENISSLLRELYAKPLSERHVESDGLIFDPAQITSRARGVAVPHGNHYHFIPEYQMSELEK  
 RIARIIPLYRSNHWVPDSRPEQSPQSTPEPSPSPQAPNPQAPSNPIDKLKVEAVRKVGDGYVFEENGVSRYIPAKDLS  
 AETAAGIDSKLAKQESLSHLKLGAKKTDLPSSDREFYNKAYDLLARIHQDLLDNKGRQVDFEALDNLLERLKDVP SDKVLVDD  
 ILAFLAPIRHPERLKGPNQAITTYDDEIQVAKLAGKYTTEDGYIPDRDITSDEGDAYVTPHMTSHWIKKDSLSEAERAAAQ  
 AYAKEGLTPSTDHQDSNGTEAKGAEAIYNRVKAARKVPLDRMPYNLQYTVVEVKNGSLIIPHYDHYHNIKFEWFDEGLYEAP  
 KGYTLEDLLATVKYVVEHPNERPHSDNGFGNASDHVQRNKGQADTNQTEKPSSEKPKTEKPEETPREKPKQSEKPKESP  
 BEPEESPESEEPQVETEKVEEKLREAEDLLGKIQDPIIKSNAKETLTGLKNNLLFGTQDNNTIMAEAEKLLALLKESKZ

**ID312** (SEQ. ID. NO. 207)

ATGGAGGGATTGGTTGAGTGTCATTTATTGCCTGTATTTGGCGATTACAAGCTATCTAACTTACTACGCCATTCTTCAACA  
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 AAAGAAAAGGCTGCTGTCAAATACTTAGACAACAAAGAAATTAACACAGTTTCTTGATTATTTAGATGCTCTGGATCAATCAA  
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 GGTCTGATATTGACCTAGAAAGCGGTGTTATCAGCATCAATAAGACACTAAACCGCTATCAGGAAATAAACTCACCTAAATCA  
 AGCGCTGTTATCGTGATATACCAATAGACAAGGCCAATTAATTTACTGAAACAAATACAAAAACCGTCAACAAATTCAGTC  
 TTGAAAATTAGGCCGATCTGAACAGTGTATTCTCTGTATTCTGATTTACGGAGAAATATGCTTATGCTTGAAGCTACGAAACGCC  
 TAAATAAGCATTTTGATGCTGCTGAGTAACCTAAGTATCATTTTCATGGTTTCCGCCATACACATACTACTATGATGCTCTAT